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To learn more about the benefits of your membership, visit www.mobot.org/membership, email membership@mobot.org, or call (314) 577-5118.

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on the cover

The Garden produces hundreds of poinsettias (*Euphorbia pulcherrima*) for the annual holiday flower and train show. Photo by Kimberly Bretz.

credits

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To discover and share knowledge about plants and their environment in order to preserve and enrich life.

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from the president



Tinter is a great time to visit the Missouri Botanical Garden, Sophia M. Sachs Butterfly House, and Shaw Nature Reserve. Enjoy plants' winter aspects that are just as beautiful as their blooming season, discover a new skill with one of our many classes, or continue the tradition by making

one of our signature events part of your celebrations (see page 16). There's something for everyone!

Take the Nature Reserve, for example. Winter is a great time for a hike, with unobstructed views and beautiful ice formations and frost flowers. The Garden is proud of all the Nature Reserve has to offer—both as a destination to experience nature and an outdoor conservation laboratory. As we say farewell to its longtime director, John Behrer (see page 5), we are excited to share with you what incoming director Dr. Quinn Long and the rest of his team have envisioned for the Nature Reserve's future (see page 14).

The Nature Reserve also holds an important place in the Garden's history of plant collections and propagation. It was there that many of our plants were housed to escape the polluted St. Louis air from the 1920s to the 1950s. Growing and caring for plants is, of course, at the heart of the creation of the Garden. Thanks to a generous donation by the Oertli family, the new Oertli Family Hardy Plant Nursery will now allow horticulturists to carry on the Garden's rich history of propagation that started with Garden founder Henry Shaw (see page 10).

Because of your support, Shaw's vision to create a world-class botanical garden dedicated to the research and display of plants lives on. And thanks to your ongoing feedback (see page 5), we will continue to improve the member experience and carry out our mission to discover and share knowledge about plants in order to preserve life. We're proud to say 2017 was yet another outstanding year for the Garden, Butterfly House, and Nature Reserve, and we look forward to new and exciting developments coming in 2018 and beyond. From all of us at the Garden, *thank you!*

Dr. Peter Wyse Jackson, President

Isabelle C. Morris

Sue B. Oertli

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what's new?



BioBlitz's bat team made the remarkable find.

Endangered Bat Documented At 2017 BioBlitz

Close to 200 students and educators and more than 300 biologists, naturalists, and citizen scientists

participated in the 2017 Academy of Science–St. Louis BioBlitz at Shaw Nature Reserve in September. They collected data for as many species as they could find, which included a federally endangered Indiana bat (*Myotis sodalis*). Bat experts led the capture, assessment, banding, and release of the bat, and they submitted their information to the U.S. Fish and Wildlife Service and the Missouri Department of Conservation. "Everyone in attendance—from kids to adults—will remember that experience for a lifetime.," says Sheila Voss, Vice President of Education. "I sure will!"



Families explored the Zimmerman Sensory Garden during Noche de Familia at the Garden.

Garden Sets the Example After First Noche de Familia

As part of their community outreach efforts, on June 12 the Garden's therapeutic horticulture staff held their first Noche de Familia, a family night event for the local Hispanic community done in partnership with

St. Louis Crisis Nursery, Kingdom House, and South City Church. More than 400 people of all ages participated in activities around the Garden, such as making seed bombs and potting basil. The event's success was shared at a Diversity & Inclusion Committee meeting of the Zoo Museum District, of which the Garden is a member. It served as a model for other local institutions, such as the Missouri History Museum's Latino Family Night in October. To learn more about the Garden's therapeutic horticulture program, visit www.mobot.org/horttherapy.

This event was made possible by the Mary Anne Lucas Fund.

Collaborating to Study Biodiversity And Protect It

The Garden is joining the Saint Louis Zoo and Washington University in St. Louis to create the Living Earth Collaborative, led by renowned biologist Jonathan Losos. The initiative will serve as a hub to facilitate interdisciplinary research among plant and animal biologists and other scholars, bringing together some of the world's top minds in the field of biodiversity. To learn more, visit source.wustl.edu.



New Curator of the Flora of Missouri

Dr. Aaron Floden joined the Garden in May as the new Curator of the Flora of

Missouri, but his work includes the broader Midwest region and parts of the Southeast. In the short period of time since his arrival, Dr. Floden has described new North American species that had been collected years ago. He's using field collections, genetic analysis, and historical records to sort out taxonomic issues as well as determine the conservation status for several species.



New Education Coordinator

Dr. Monica Carlsen joined the Garden in March as the first Education Coordinator

in the Science and Conservation division. She had been a graduate student working with Senior Curator Dr. Tom Croat before going to the Smithsonian National Museum of Natural History. Now back at the Garden, she will continue her work with the aroid family and lead the education programs for undergraduate students interested in plant science careers.

2017 Membership Survey Results

Thank you to everyone who completed the 2017 member survey. We will use the great feedback you shared with us to continue to improve the member experience.



11% response rate



91% enjoyed a signature event*



6.7 times/year average visits



87.5% visited the Japanese Garden*



22.3% interested in volunteering



92.5% feel membership is a good value

*in the past year



Shaw Nature Reserve Director Retires

John Behrer retired this fall after almost 40 years at Shaw Nature Reserve. He started as a high school student on a summer job. He returned in 1978 as full-time staff, serving as director since 1988.

During his tenure, existing buildings were upgraded and new facilities were built, including the Edgar Anderson Center, the Glassberg Pavilions, the Adlyne Freund and Dana Brown Overnight Education Center, and the Nature Explore Classroom.

His true love has always been the natural world, and that passion made the Nature Reserve the ecological jewel it is today. Restoration of glades, savannas, woodlands, wetlands, and tallgrass prairies has re-established ecosystems and provided models sought out by ecologists and landowners throughout the region. "It is rare to find someone who has such a remarkable connection to an institution, the land, and landscape as has John Behrer for Shaw Nature Reserve," says Garden President Dr. Peter Wyse Jackson. "John has shaped the Nature Reserve in a fundamental way over his career, and I have no doubt that it has shaped John too. As a result, we have a world-renowned resource and facility that the Missouri Botanical Garden is hugely proud of."

Garden Teams Aid In Recovery Efforts After Hurricanes

Horticulturists coordinated recovery trips to two of the botanical gardens hit hardest when the catastrophic hurricanes Harvey and Irma ravaged parts of the United States in September: Mercer Botanic Gardens in Texas and Naples Botanical Garden in Florida. Visit www.discoverandshare.org to learn more about the visits and how you can help.



Garden for the World Update

Great progress has been made on the restoration and expansion of the Stephen and Peter Sachs Museum Building. Many of the underlying mechanical systems—plumbing, electric, storm sewer, and others—are completed and on schedule. Walls are going up for the addition, work continues on the ceiling and skylight, and other amenities will be incorporated. Modern additions will be invisible in the historic space to preserve the aesthetic. We look forward to opening this building to our members and guests in the spring.

Also, the first phase of the new Oertli Family Hardy Plant Nursery is nearly complete. See page 10 to learn about the Garden's greenhouses and history of propagation. For more information about these two projects, visit www.mobot.org/fortheworld.

5

research news



Local community members install signs to delineate Ankafobe Forest as a protected area

A Step Closer To Becoming An Official Protected Area

A tiny fragment of highland forest in Madagascar is in the process of being designated as an official protected area. Ankafobe Forest is one of the sites where the Garden promotes community-based conservation and management. The Garden is helping the local community and Madagascar's Land Tenure Department to delineate its extent and establish its borders.

The forest is one of the rarest and most threatened ecosystems in Madagascar. It contains much of the world's remaining population of the critically endangered tree *Schizolaena tampoketsana*, and it is also home to a newly discovered isolated population of the endangered fat-tailed dwarf lemur.

This work is made possible by the Rainforest Trust.

St. Louis-Based Collaboration To Save Madagascar's Flora

The Garden is playing a leading role in a three-year project to protect the fragile flora around the Betampona Reserve in Madagascar. The project is on its second year and features a new nursery at Parc Ivoloina to propagate seeds of native plants collected from fragile forest fragments. These efforts are done in collaboration with the Madagascar Flora and Fauna Group, whose secretariat is the Saint Louis Zoo, and the Royal Botanic Gardens, Kew.

To date, thousands of seedlings of more than 150 threatened plant species have been propagated and will soon be planted at Parc Ivoloina. The goal is to conserve at least 500 native plant species by the end of the project. "Most *ex-situ* conservation efforts focus on species evaluated as critically endangered," says Chris Birkinshaw, Associate Curator in the Garden's Africa and Madagascar Program. "But since so much of the Malagasy flora has not been evaluated and with 60% to 70% likely threatened, it makes sense to grab all the biodiversity we can and protect it before it is too late."

This work is made possible by a grant from the Darwin Initiative.



Dr. Randrianasolo (second from left) and two Peace Corps volunteers at a community meeting.

Measuring Success Through Trust

Curator Dr. Armand Randrianasolo has been part of the Garden's conservation efforts in Madagascar since they began almost two decades ago. Through the years, he has gained the trust of the communities.

In 2016, however, he started to wonder how to prove that this valuable trust played a role in the Garden's success. He reached out to his son, Dr. Arilova Randrianasolo, Assistant Professor of Marketing at John Carroll University, to use marketing and business management methodologies and data analysis to measure that trust. In August, they published their results in the journal Madagascar Conservation & Development.

The paper introduces the concept of organizational legitimacy into the realm of community-based conservation. Their findings show that, in order to build trust, organizations should first establish legitimacy, which indirectly affects attitudes toward the organization and its activities. "We knew that the communities we work with have a positive attitude toward the Garden, and that means people are more willing to participate in conservation activities," he says. "This paper is one way to empirically prove that." The paper is one resource Dr. Randrianasolo hopes other conservation organizations can use when developing their community-based conservation strategies.

What Do In-situ And Ex-situ Conservation Mean?

When determining the best approach to protecting a rare or endangered species, the methods are usually divided into two categories: *in-situ* and *ex-situ*. As their Latin origins describe, these two words refer to where the conservation efforts are taking place—in the natural habitat or outside of it.

In-situ conservation is considered the most appropriate way to protect biodiversity, which underlines the importance of working with local governments and communities to create protected areas (see page 6). This strategy is not always possible due to natural and man-made threats that affect the habitat, such as floods, climate change, and human development. That is why *ex-situ* methods, such as seed banking and off-site propagation (see below), provide species protection away from their natural habitat and complement on-the-ground habitat preservation, restoration, and management.



Ex-situ propagation of Memecylon xiphophyllum.

Collection to Conservation

In January 2017, Garden curators doing field work in Analalava, Madagascar, collected specimens of *Memecylon xiphophyllum*, a locally endemic species. With only 12 individuals known, this shrub is rare and critically endangered. This was only

the third time that this species had ever been collected. Much to the curators' surprise, this was also the first time the flowers had been observed and described.

Dr. Robert Douglas Stone, Senior Research Associate at the University of KwaZulu-Natal in South Africa, first collected the plant back in 2001, but it was only in bud. This past April, he contacted Dr. Pete Lowry, Director of the Africa and Madagascar Program, after learning of the January collection through the Garden's online database, Tropicos. The conversation turned to the conservation of this rare species, and they agreed that future collecting should focus only on careful harvesting of the fruits. This would prevent impacting the small number of individuals in the wild and enable this species to be propagated *ex-situ* for future reintroduction.

Later that fall, local Garden staff reported that the shrub's seedlings were growing in the Analalava nursery. When ready, these plants will be reintroduced to their natural habitat. "This is a great example of how field work led to additional collections, and then a successful effort to reinforce *in-situ* conservation through *ex-situ* cultivation, all at a Garden conservation site," says Dr. Lowry.



Natural Path
Jeannie
Raharimampionona
Conservation
Coordinator

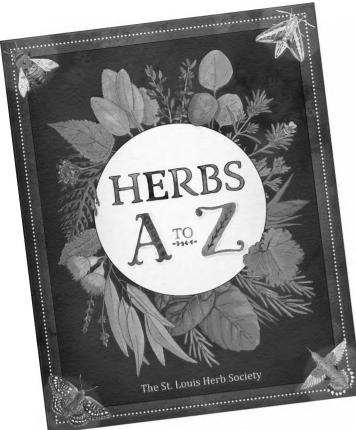
Jeannie Raharimampionona joined the Garden in 1994, and her career in the Africa and Madagascar Program has followed a natural path from taxonomy to analysis to conservation.

After graduating from the University of Antananarivo in Madagascar, she became one of the data entry specialists working on the Garden's plant database, Tropicos, and what would become the Catalogue of the Plants of Madagascar. Ten years later, she was one of the key staff members who, thanks to the support of the Critical Ecosystem Partnership Fund, developed a list of 80 high-priority areas identified for plant conservation using the plant inventories and other botanical data they had been collecting.

Raharimampionona then became one of the lead staff implementing conservation activities in collaboration with local communities, first at two sites and then expanding to 10 more. In 2009, the program's Conservation Unit was formed. As its coordinator, she manages conservation efforts in a total area of over 200 square miles.

She does all this while continuing to study the genus *Canarium*. Thanks to her work, the number of *Canarium* species recognized in Madagascar has grown from two to more than 30. "When I was a student, I learned about plant taxonomy, but I couldn't really understand the importance of botany until I started working for the Garden," she says. "I became aware of what was at stake."

Winter 2017–2018 Missouri Botanical Garden *Bulletin*



Don't Forget Your ABCs

You won't want to miss the new book by the St.
Louis Herb Society. Herbs
A to Z, published by MBG
Press, is a 56-page book that introduces young readers to some popular and some less-well-known herbs. It features stunning, hand-drawn illustrations in full color along with some of the facts and stories that surround each of

the herbs. For more than 75 years, the St. Louis Herb Society has been dedicated to promoting the use and knowledge of herbs. They also maintain the herb garden at the Garden and host the annual Herb Sale every spring. Copies available starting Thanksgiving week at the Garden Gate Shop, www.mbgpress.org, or www.stlouisherbsociety.org.



Consider Making a Year-End Gift

The Garden is a world-leading botanical institution because of donors like you. Consider making a year-end gift over and above your membership to support the Garden's work in St. Louis and around the globe. We can't do this without you! Visit www.mobot.org/donate, call (314) 577-5118, or stop by the Membership Services Desk to make a tax-deductible donation.



Share the Garden With Someone Special

A Garden membership makes an excellent gift and provides a full year of great benefits. To give

a gift membership, visit the Membership Services Desk at the Garden, Butterfly House, or Shaw Nature Reserve; call (314) 577-5118; or visit us online at www.mobot.org/membership. Christmas delivery guaranteed through December 10.

Save The Date for Our Science and Sustainability Open House

On March 3 and 4 from 1 to 4 p.m., two of the Garden's rarely seen behind the scenes areas will be open to the public. Meet our scientists and learn how they collect, study, and conserve plants. You can also learn about the Garden's community sustainability programs with the EarthWays Center staff. More information at www.mobot.org/events.

Give Them a Garden Gift Card

If you haven't done your holiday shopping yet, consider a Missouri Botanical Garden gift card. Purchase one at the Garden and Butterfly House ticket counters or online at www.mobot.org.



It can be used to buy admission tickets, sign up for classes, enjoy a meal at Sassafras, buy a membership, or get that unique present at the gift shops.

*shipping fee applies

photo by Wesley Schaefer

Morpho San Mardi Gras

bugs, butterflies, and beads

Bring your Krewe to the carnival during the months of February and March. Join the party at our bug parade, make a masquerade mask, and immerse yourself in a sea of blue as the Butterfly House floods the tropical conservatory with thousands of Blue Morpho butterflies. Learn about the critical role butterflies play in nature, and how the Butterfly House is involved with butterfly conservation efforts in Costa Rica. More details at www.butterflyhouse.org.



Discover the New BH Gift Shop

The Butterfly House Gift Shop has gone through a metamorphosis of its own. On your next visit, make sure to stop by and check out all the new offerings—from apparel and home accents to plants. You'll find new and unique items that are perfect for your home, garden, or as a gift. The shop is open during regular Butterfly House hours: Tuesday–Sunday, 10 a.m. to 4 p.m.







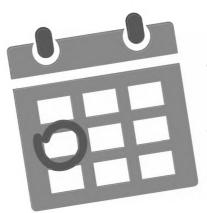
Discover Something New With One Of Our Classes

Escape the cold with the great classes for kids and adults offered at the Garden, Butterfly House, and Shaw Nature Reserve. From garden planning to winter drawing to making maple syrup—we offer something for everyone! Members always receive discounted pricing for classes. More information at www.mobot.org/classes. And save the date for February 1, when registration for our spring and summer classes opens. Look for your class catalog in the mail.



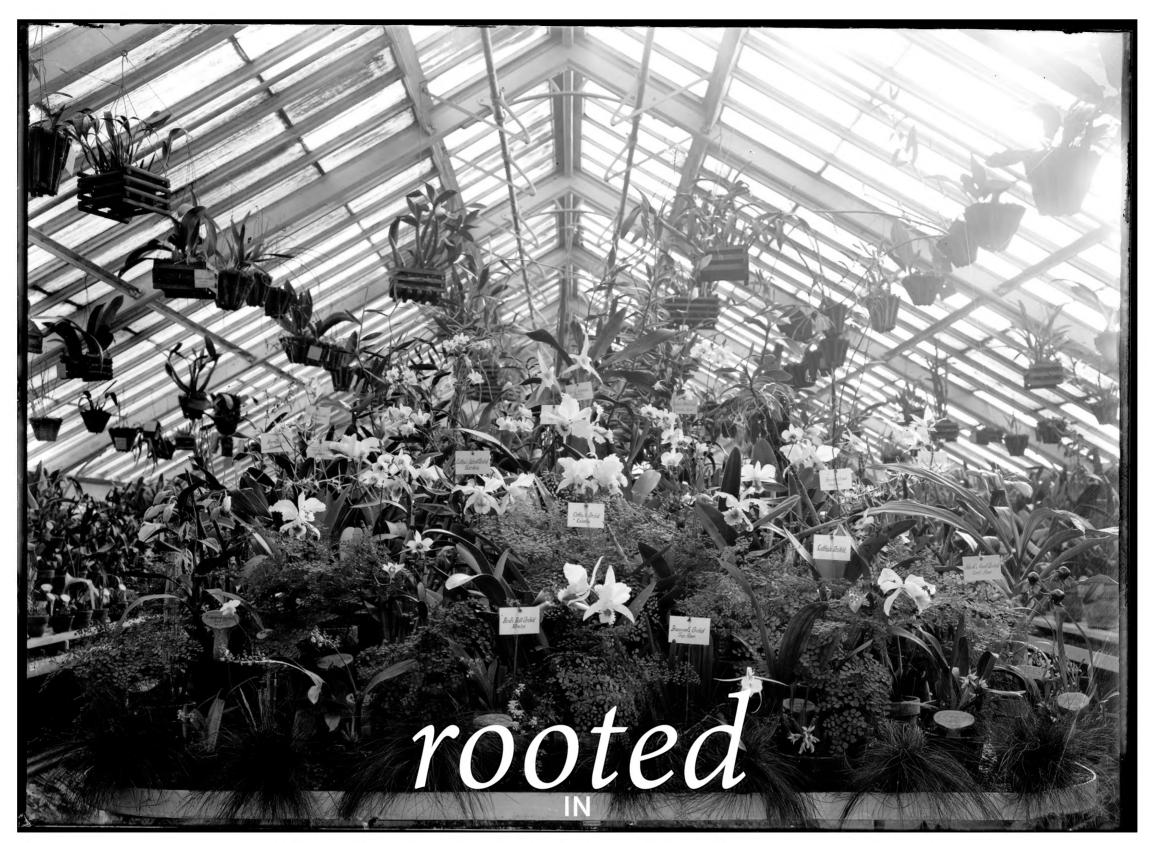
Enjoy Botanical Illustrations

In February and March, in conjunction with the 2018 Orchid Show, view beautiful orchid illustrations from the 19th century book *The Orchidaceae of Mexico and Guatemala* by James Bateman, one of the gems in the Garden's Rare Book collection in need of conservation. Learn more about our rare book conservation program at the Member Speaker Series presentation on January 23 (see page 18). Exhibit on display in the Ridgway Visitor Center. Included with Garden admission.



What's happening next summer?

Something extraordinary! Find out more about the Garden's next major summer exhibit on January 16, 2018 at www.mobot.org.



HISTORY

propagation at the Garden through the years

Behind the beautiful display gardens you enjoy each time you visit, a whole world is dedicated to the art and science of cultivating and managing plants. Some plants are displayed in the different formal gardens and others are showcased in floral shows. Some are part of curated collections from around the world, while others are seedlings of some of the world's most threatened species. They all make up one of the Garden's most valuable collections—its living plants.

Growing and caring for plants is at the heart of the Missouri Botanical Garden. Founder Henry Shaw

conceived the idea of creating his own garden after being inspired by the great English gardens he visited in the 1850s. In his will, he specified that the Garden should be "forever kept up and maintained for the cultivation and propagation of plants, flowers, fruit and forest trees, and other productions of the vegetable kingdom."

Propagating and maintaining plants for both yearround displays and research also means having the right space and conditions to do so. To this day, the Garden's Horticulture team carries on Shaw's vision. However, the time has come for the Garden to take its cultivation and

History of Greenhouses



▲ Henry Shaw commissioned the first main conservatory and greenhouses. The 1868 Conservatory, as it was known for the year it was built, consisted of a long central bay with greenhouses on each end. It housed exotic plants such as cacti and orchids. It was also here where chrysanthemums were grown for the Garden's first "mums" show, which was held in a tent in 1905. The conservatory was the centerpiece of the Garden's display until it was torn down in 1914.

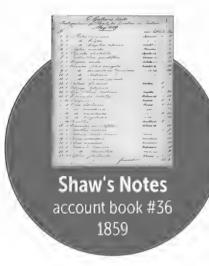




▲ The Palm House, a large greenhouse for tropical plants, was built in 1913 and replaced the 1868 Conservatory.

1859Missouri Botanical

Botanical
Garden opens
to the public





▲ The Linnean House was built in 1882 as a supporting greenhouse. This structure still stands today as the oldest continually operating greenhouse west of the Mississippi River.



Building the Collection

The orchid collection (opposite page) began with a sampling that Mrs. Henry T. Blow gave to Shaw in 1876. In 1918, Dr. D.S. Brown donated his collection to the Garden, and in 1923 horticulturist George Pring brought back eight tons of orchids after spending six months collecting plants in Panama and Colombia. Learn more at the Member Speaker Series presentation on February 3 (see page 19).

propagation efforts to the next level, both in terms of capacity and conservation focus. That's why, thanks to a generous donation by the Oertli family, the first phase of the new Oertli Family Hardy Plant Nursery is nearly complete.

The Early Years

The Garden's history of propagating plants goes back to its early years. As he was planning his new Garden, Shaw ordered and cultivated a large number of plants, including some trees that are still standing today. He also welcomed cultivation and placement advice from some of the local and midwestern suppliers. Horticultural information tailored to a specific region was valuable information not easily accessible in Shaw's day.

Shaw is known for the meticulous notes he took, including the plants he ordered. His notations include habit and cultivation information, the common and scientific name of each plant, and more. "These notations (not unlike Thomas Jefferson's garden books) provide insight into Shaw's working method and his hands-on participation in the process," writes Carol Grove in the book *Henry Shaw's Victorian Landscapes*.

History of Greenhouses



▲ In 1915, a new support greenhouse range was built, and it included a new Floral Display Hall designed for showcasing horticulture displays year-round. These 14 greenhouses, located behind the Palm House, had been designed based on the environmental needs of the plants they would house, such as aroids, bromeliads, orchids, and water lilies.



▲ In 1927, the orchid collection was relocated to the newly purchased Shaw Nature Reserve. The plants were suffering from the city's poor air quality caused by all the soot and smoke from coal-burning factories. By 1943, around 20,000 plants, mostly orchids, occupied 12 greenhouses at the Nature Reserve. The orchid collection in particular had commercial value to the Garden. The business of selling orchids to St. Louis florists in the 1940s amounted to nearly \$70,000 per year.



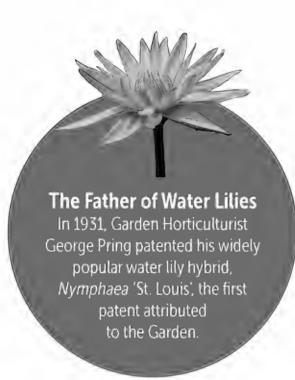
Growing the Finest
In 1959, the St. Louis Herb
Society held its first sale. For
many years, Society members
cultivated and propagated
the herbs in the Garden's
greenhouses with the help of
Garden horticulturists.



▲ Two experimental greenhouses were also built to provide space for experimental work carried out by local graduate students and students of the Garden's School of Gardening.

1925

Missouri Botanical Garden purchases 1,300 acres in Gray Summit, Missouri. It's first called the Gray Summit Extension, then the Missouri Botanical Garden Arboretum, and finally Shaw Nature Reserve.



1958

The orchid collection moves back to the Garden in the city. Garden director George Moore had been instrumental in promoting a local smoke abatement ordinance.

The Greenhouses Today

The Garden's current one-acre greenhouse complex was built in 1988. It includes 18 heated greenhouses, one unheated greenhouse, and a small outdoor nursery area for trees, all connected to a large central hallway.

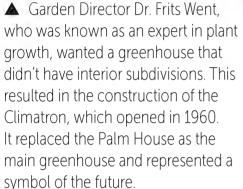
Today, the Garden produces close to 200,000 plants each year for the displays and annual flower shows. The greenhouses are also home to several permanent collections, including roughly 7,500 orchids, 700 cacti and succulents, and 8,000 aroids and other plants collected in the field. This leaves little room for anything else to be propagated, studied, and protected.

The Future of Propagation at the Garden

Thanks to the Oertli family's generous gift of nearly 6.3 acres of land just south of the Garden, the new Nursery will support the Garden's production work and plant conservation efforts.

As the Garden's focus turned from building and expanding to plant conservation when Dr. Peter Wyse Jackson became Garden President in 2010, the living collection also reflected this shift. "We typically add about 2,500 to 3,000 accessions every year into the Garden's living collections," says Andrew Wyatt, Senior Vice President of Horticulture and Living Collections. "A large portion is







Conservation
In 1990, Running
buffalo clover (*Trifolium*stoloniferum) became the
first endangered species
propagated at the Garden
to be reintroduced
to the wild.



The groundbreaking of the new Oertli Family Hardy Plant Nursery occurred in 2016. The first phase included demolition of existing structures, grading the land, and laying infrastructure for new buildings and pathways. A greenhouse structure previously donated by Ahners Nursery is being erected, with two houses designated for cuttings and seed propagation, and a separate large area within the greenhouse designated for hardy plant production.



▲ In 1966, new greenhouses were built. A nursery was also built in the northeast area of the Garden (presently the east parking lot), and it was used to grow hardy plants.



▲ The current greenhouse complex was built in 1988. About 700 tropical foliage plants for the Orchid Show and 800 potted poinsettias for the Gardenland Express Holiday Flower and Train Show are produced in the one-acre complex today.



Greenhouse Expert

Senior Horticulturist Steve Wolff has worked in the greenhouses more than 40 years. From manually turning valves to adjust the heat to coming up with his own soil mix formula, Wolff has done it all. "Back then we just didn't produce that many plants for use in the Garden, and things just gradually changed as time went on and more plants were required for the different displays in the Garden."

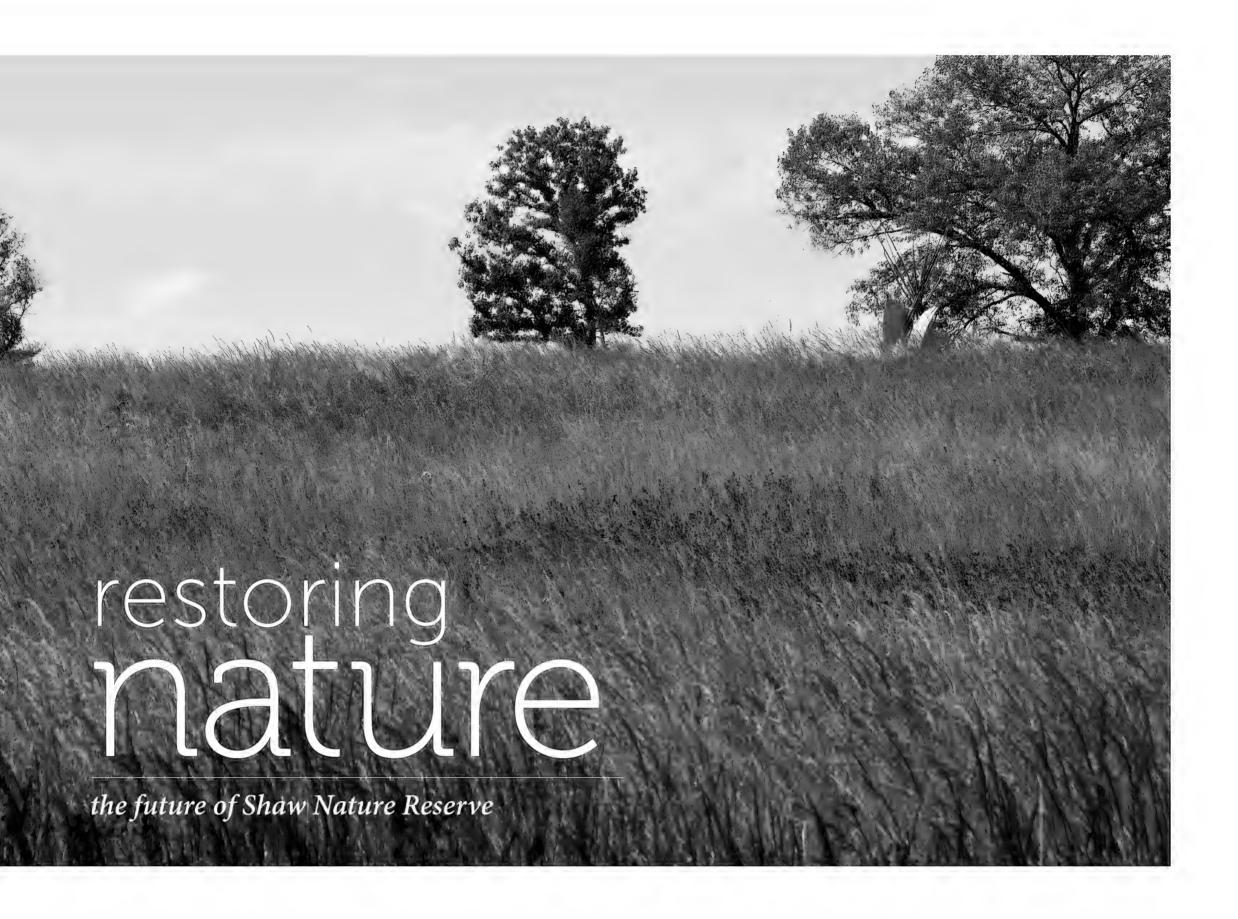
focused on plants of conservation concern because that's our primary priority."

The Nursery will also impact what you see around the Garden. In the 1980s and 1990s, when many of the new gardens were being built, the Garden wasn't producing any of the plants in-house. According to Jim Cocos, Senior Manager of Horticulture, everything was bought from commercial nursery sources—some local, some from across the country, and some international. That practice has continued, in part, because of the lack of space to grow much more than what's already there. The Nursery will allow horticulturists to grow approximately 95% of all the

plant material needed on the grounds. "It's going to take some additional planning and thinking because you can't just drive to your local garden center and pick up the plants," says Cocos. "For instance, some of the hedges in time will have to be replaced, and we'll be able to grow those plants here. We'll save money, and we can be sure of quality."

Be A Part of the Garden's Future

Visit www.mobot.org/hardyplantnursery to learn more about this exciting project and how your support can have an impact on the Garden's future horticulture and conservation efforts.



lmost 100 years ago, Shaw **A**Nature Reserve served as a refuge for some of the Garden's plant collections threatened by the polluted St. Louis environment. Today, it has become a world-renowned model for restoring native plants and landscapes. Conserving plants, animals, and their homes is becoming an increasingly important concern for all. The public and conservation experts alike can turn to the Nature Reserve as a model for addressing the environmental challenges ahead through native plant horticulture, ecological restoration, and environmental education. What happens there can shape what the local, regional, and even global landscapes will look like in the next 100 years.

Native Plants, Global Focus

The Nature Reserve is home to one of the Midwest's most impressive displays of native plants in a horticultural context: the Whitmire Wildflower Garden. It features over 700 Missouri native plant species used in formal and informal settings, serving as inspiration for home gardeners and landscape professionals alike. Looking ahead, the garden will have new and exciting displays, including a garden featuring native edible plants. "The most local foods one can possibly envision are those not only grown locally, but evolved and adapted locally and used for centuries—in some cases millennia—as sources of sustenance," says Dr. Quinn Long, who was recently named Director of Shaw Nature Reserve (see sidebar).

Horticulturists at the Nature Reserve are also pioneering the trial of native plants that can be used in landscapes. This begins with a deeper knowledge of the native flora of Missouri and seed collection trips often done in collaboration with the Garden's Seed Bank staff. If certain species collected for conservation in the seed bank have possible interest for native plant horticulture, staff will collect seed from around the region and learn how to propagate the plants. This is important to assess plants' horticultural potential and for conservation.

Conservation for the Future

The Whitmire Wildflower Garden will also feature a new threatened plant garden. It will give visitors a chance to see rare species that they likely would not encounter in their native habitats. "There's a lot of interconnection between native plant horticulture and ecological restoration," says Dr. Long. "The expertise of our native plant horticulture team often comes into play when working with rare species that are difficult to propagate, and using those in a restoration context, not just here at the Nature Reserve, but also regionally."

Dr. Long's background in ecological restoration is one of the many strengths he brings to the Nature Reserve; it continues to serve as a hub, laboratory, classroom, and showcase for best practices. While ecological restoration has been part of the Nature Reserve's conservation efforts since the 1980s, Dr. Long hopes to build upon that experience to train the next generation in the practice of restoration. "That will allow us to expand the scale and the intensity with which we engage in our restoration projects moving forward," he says. "We still have much to accomplish in the years ahead as we expand with our ambitious goals to implement restoration and management for native biodiversity on the entire 2,400 acres."

Inspiring Stewardship

In addition to its long history as a living laboratory for advancing ecological and scientific research, the Nature Reserve has become a premier educational venue for people of all ages and backgrounds. The youngest visitors engage with the Sense of Wonder Woodland, teens are introduced to environmental science careers through the Shaw Institute for Field Training (SIFT), and tours and training are provided to homeowners and professionals through the Native Plant School. Continuing to honor that strong reputation will be crucial to sharing the Nature Reserve's mission with the rest of the world.

Nearly 70,000 people visit the Nature Reserve every year, exploring the Whitmire Wildflower Garden, the historic Bascom House, and 14 miles of hiking trails. More than 20,000 people participate in education programs annually. Few places provide immersive education to inspire the next generation of environmental stewards like the Nature Reserve does. "Without fostering appreciation of our environment in the next generation," Dr. Long says, "there will be no longevity to the restoration and conservation efforts that we're doing here and now."

Be A Part of the Nature Reserve's Future

Honor the Nature Reserve's commitment to our environment with a special year-end gift! Visit www.mobot.org/snrgift to support future conservation.



NATURE'S STEWARD

Dr. Quinn Long was named Director of Shaw Nature Reserve in the summer of 2017.

A conservation biologist in the Garden's Center for Conservation and Sustainable Development, he has a connection to the Garden, the Nature Reserve, and the region that goes back to his childhood.

At just two years of age, Dr. Long lived in a cabin on the south side of the Meramec River, adjacent to the Nature Reserve. He spent a lot of time along the gravel bars of the Meramec River chasing water striders. "Throughout my childhood I spent many days at Shaw Nature Reserve, frequently visiting with family," he says. "As I became a teenager, visiting on my own and exploring the many habitats here had a very formative influence on my appreciation of nature and, ultimately, my career pursuits."

Dr. Long received his PhD in Ecology and Evolutionary Biology from the University of Kansas and bachelor's degree in Biology from the University of Missouri–Columbia. He first encountered the term "restoration ecology" at the Nature Reserve while studying populations of the genus Echinacea as an undergraduate student. He visited the Nature Reserve often to study botany and learn about the ecological restoration work there. This inspired efforts to restore his family's property in northwestern Franklin County. "Over the years I looked to the Nature Reserve for inspiration and then began experimenting with land stewardship, first in a more casual, novice way," he says, "but then that ultimately influenced me to pursue my doctorate in restoration ecology."

To learn more about Dr. Long and his vision for Shaw Nature Reserve, visit www.discoverandshare.org.



Winter is the most wonderful time of the year at the Garden. Events and activities offer fun for guests of all ages—and most are free for members.

Take a look at what winter has to offer.



Garden Glow

November 18–January 1 | 5–10 p.m.

The fifth anniversary of Garden Glow brings the best experiences of the past years together with new delights, such as the expanded light display in the Central Axis, a transformed Field of Lights, and brand new "12 Days" scenes near the Linnean Lights.



Gardenland Express

November 18–January 1 | 9 a.m.–4 p.m. and Garden Glow The annual holiday flower and train show returns celebrating a favorite holiday plant, the poinsettia. G-scale trains travel through miniature scenes of the plant's native home of Mexico. Members enjoy free daytime admission to Gardenland Express, and nighttime admission is included in the member Garden Glow ticket price.



Victorian Christmas at Tower Grove House

November 15-December 31 | 10 a.m.-4 p.m. | Wednesday-Sunday | Closed Thanksgiving and Christmas Day | Open during Garden Glow
See the country home of Garden founder Henry
Shaw decked for the holidays in true Victorian style.
Decorations are provided by local garden clubs and the Garden Members' Board. Enjoy special activities for children and storytelling on Wednesdays and Saturdays at 11 a.m. and Sundays at 1 p.m.



Holiday Wreath Display and Auction

November 17–January 1 | 9 a.m.–4 p.m.

Monsanto Hall is decked with lavish creations donated by St. Louis's finest florists. Each unique wreath is available for purchase through silent auction. The annual display is coordinated by the Garden Members' Board. Wreaths are awarded to the highest bidder on January 2, and all proceeds support the Garden's Horticulture division. More information at www.mobot.org/wreathauction.



Holiday Trimmings at the Kemper Center

December 1–January 1 | Open daily | 9 a.m. to 3 p.m.

Visit the William T. Kemper Center for Home
Gardening in December to enjoy nature-based holiday trimmings. The centerpiece is a 12-foot-tall balsam fir decorated with hand-crafted "gourdaments" and gourd birdhouses. Gourd ornaments are created by Garden staff and volunteers, and available for purchase. All proceeds support the Center for Home Gardening.

Garden Glow Member FAQ

When is the Member Preview Night? Friday, November 17. Advance tickets required.

What are the dates of Garden Glow? November 18–January 1.

Is Garden Glow closed any nights? December 24 and 25. (Christmas Eve and Christmas Day)

What are the hours? 5–10 p.m. each night.

How much are member tickets? \$12-\$14 Member adults, depending on the night. \$3-\$6 Member children, ages 3-12, depending on the night.

How do I purchase member tickets? Visit the ticket counter or www.mobot.org/glow.

How many member tickets can I purchase? The number of adult tickets is based on your membership level. Garden and Garden Senior levels can purchase up to 2 adult tickets per night at the member price.

Members may purchase as many member child tickets as needed by the member household.

How do Festival or Contributor-level members get their free tickets?

Visit www.mobot.org/festivalmembers or call (314) 577-5118 to request free tickets. Giving Societies' members may call (314) 577-5173 or email donors@mobot.org.

Are tickets timed?

Tickets are both dated and timed. Times begin at 5 p.m. each night. Last entry is at 9 p.m.

What's the best night to attend Garden Glow?

Mondays and Tuesdays are the quietest nights with the lightest crowds.

Wednesday Family Nights offer \$3 tickets for all children, member or nonmember. See schedule.

Is food available?

Dining in Sassafras café (last entry 8 p.m.) and in Café Flora until 9 p.m.

Is the shop open?

The Garden Gate Shop is open 5–10 p.m. each Garden Glow night.

More at www.mobot.org/glow

photos by Claire Cohen, Tom Incrocci, Mary Lou Olson, and Kat Niehau

just for members











Membership Benefits

From discounts to event previews to exclusive access—your membership gives you more of what you love about the Garden, Butterfly House, and Shaw Nature Reserve.

Garden Glow Member Preview

November 17 | 5–10 p.m.

Presented by

Wells Fargo Advisors

Celebrate the season
with family and friends
on a members-only
night! Advance tickets
recommended.
\$14 members; \$6 member
children; Free for
Festival-level members
and above.

Breakfast with Santa December 2 | 8, 8:45,

and 9:30 a.m. seatings
Ridgway Visitor Center
Visit with Santa as he
stops by the Garden for our
members-only breakfast.
Enjoy live music, crafts,
and opportunities to take
photos with Rudolph,
Frosty, and Mrs. Claus.
\$20 member adults;
\$15 member children.
Registration required;
space is limited.

Member Speaker Series: Rare Book Conservation

January 23 | 11 a.m.-noon
Conservator Susie
Cobbledick explains
another type of
conservation at the
Garden: taking care of
the Library's rare books.
Some of these valuable
resources are more than
600 years old!
Free for members.
Registration required.













Orchid Show Member Preview

February 2 | 5:30-8:30 p.m. Members see it first!
Enjoy a members-only evening viewing of the 2018 Orchid Show, featuring beautiful orchids from the Garden's historic collection. Cash bar available; Garden Gate Shop open. Free for members.

Member Speaker Series: History of Orchids

February 3 | 11 a.m.-noon Orchid enthusiast Dr. Ira Kodner discusses the history of this intriguing plant. After the presentation, visit the Orchid Society Show and Sale for new plants of your own. Free for members. Registration required.

Morpho Mardi Gras Member Open House February 26 | 10 a.m.-noon

Butterfly House
Enjoy a Mardi Gras
carnival at this event
exclusively for members.
Bring the little ones out to
watch a bug parade, make
a masquerade mask,
and visit thousands of
Blue Morpho butterflies.
Refreshments provided.
Free for members.
Registration required.

Member Discounts at the Shops

Find the perfect gift and support the Garden's mission when you shop at the Garden Gate Shop, Butterfly House Gift Shop, and Little Shop Around the Corner. Every time you shop, membership levels up to Friends and Family receive a 10% discount, and Festival level and above receive a 20% discount.

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Holiday Wreath Display and Auction

November 17—January 1
Ridgway Visitor Center

This annual holiday exhibit features unique creations donated by some of the area's finest floral designers. Wreaths are sold by silent-auction bidding. Proceeds benefit the Garden's Horticulture division. Included with Garden admission; www.mobot.org/wreathauction.



Victorian Christmas at Tower Grove House

November 15-December 31

See the country home of Garden founder Henry Shaw decked out for the holidays in true Victorian style (closed Thanksgiving Day and Christmas Day). Enjoy storytelling on Wednesdays and Saturdays at 11 a.m. and Sundays at 1 p.m. Don't forget to also stop by the William T. Kemper Center for Home Gardening for more holiday decorations.



Chanukah: Festival of Lights December 10 | noon-4 pm. | Ridgway Visitor Center

A traditional Jewish holiday celebration that includes festive Israeli music and dance, a menorah-lighting ceremony, and Chanukah merchandise provided by local vendors. Included with Garden admission.



December 27 | noon-4 p.m. Ridgway Visitor Center

This contemporary African-American

holiday centers around the feast table of the harvest. Join us for a day of storytelling, craft and jewelry displays, and musical performances. Included with

Garden admission.



Orchid Nights

February 8 and 22 | March 8 and 22 6–8 p.m. | Ridgway Visitor Center Exclusive lighted viewings of the Orchid Show, live music, wine tastings, and a cash bar. Ticket includes choice of one signature cocktail or one beer/wine. \$15 members; \$20 nonmembers. www.mobot.org/orchidshow.



photos by Tom Incrocci, Claire Cohen, Mary Lou Olson, and Wesley Schaefer

shop & dine

From gardening tools and unique toys to vintage items and local products, the Garden shops have just what you're looking for.

Look for these icons to know where each event or sale is taking place.



Garden Gate Shop

4344 Shaw Blvd. St. Louis, MO 63110 Monday–Sunday 9 a.m. to 5:30 p.m. (314) 577-5137



Butterfly House Gift Shop

15193 Olive Blvd. Chesterfield, MO 63017 Tuesday–Sunday 10 a.m. to 4 p.m. (314) 577-9477



Little Shop Around the Corner

4474 Castleman Ave. St. Louis, MO 63110 Tuesday—Saturday 10 a.m. to 4 p.m. Sunday, noon to 4 p.m. (314) 577-0891

Seasonal Closings

The Butterfly House, including its gift shop, and Little Shop Around the Corner will close temporarily in January for annual inventory and maintenance work. Mark your calendars and don't forget to stop by in February for more events and great sales. Sassafras, the Garden's café, will be closed January 2–12.

First Fridays

First Friday of the month | **

Discover something new—from book signings to food samplings to trunk shows. More at www.mobot.org/shop.

Little Shop Around the Corner Member Sale

November 16 | 2–6 p.m. | 🗸

All members enjoy a 40% discount throughout the shop (no additional discounts apply).

Spirit of the Season Dinner

November 30 | 7 p.m. | Spink Pavilion
Delicious four-course dinner featuring
craft cocktails and original culinary
creations. \$60 (includes Garden Glow)
Attendees must be at least 21. Limited
seating available. Advance purchase
required: call (314) 961-7588 ext. 265.

Herbs A to Z Book Signing

December 1–2 | 1–4 p.m. | **₩**

Meet members of the St. Louis Herb Society for a book signing of their beautifully illustrated new book.

Staff and Volunteer Sale

December 6–7 | ₩ ▶ 🗸

As a "thank you" for making the Garden a world-class institution, all Garden staff and volunteers receive an extra 10% off their purchases.

Member Double Days

December 3-4 and February 4-5 |

* > 4

All Garden members receive 20% off purchases or double card punches.

Happy Houseplants Book Signing

December 16 | noon−4 p.m. | ₩

Meet author Angela Staehling for a

book signing of her letest guide for

book signing of her latest guide for any budding indoor botanist.

Pot A Plant

December 20 | 👋

Buy a plant with a pot and have one of our plant specialists plant it for you for free. See shop for details.

Little Shop Around the Corner Year-End Clearance Sale

December 26–31 | 10 a.m.–4 p.m. | A Start the year off right with unique vintage items for your home.

Everything in the shop is 50% off (no additional discounts apply).

» staff pick



The Blessing Flower Jewelry

Designed by Galya Harish, this jewelry features a unique desert flower that, when dry and closed, is hard like a stone. When it comes in contact with water, its petals open and reveal the seeds inside. Each bloom is carefully cultivated, selected, and attached by hand to the necklaces, bracelets, rings, and earrings. Prices range from \$69.99–\$114.99. Available at the Garden Gate Shop.

Take home this cardinal ornament, only \$15 with any purchase at the Garden Gate Shop. While supplies last.

commemorative gifts

July-September 2017. A commemorative gift is a wonderful way to honor family and friends. Gifts of \$50 or more are listed in the Bulletin. For more information about giving opportunities at the Missouri Botanical Garden, please call (314) 577-5118 or make a commemorative gift at www.mobot.org/tributes.

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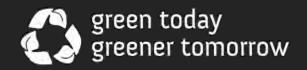
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In Memoriam: Charles Knight

The Garden honors Mr. Charles "Chuck" Field Knight, who passed away on September 12. Chuck and his wife Joanne were Garden friends and supporters for more than 30 years. We are proud to be one of the many organizations in St. Louis that have benefitted from Chuck's passionate support and civic leadership in his adopted hometown.

Chuck focused his philanthropy on education and health. The cultural and business communities of St. Louis have been greatly enriched by the acumen, advocacy, and philanthropy Chuck provided over his decades in our city. He will be greatly missed.

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February 3–March 25 www.mobot.org/orchidshow photo by Mary Lou Olson



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calendar

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december | january | february



speaker series

monthly presentations for members only



These free monthly presentations feature local experts offering a light, informative look at a variety of topics through the year.

Advance registration required; space is limited. Presentations take place in Shoenberg Theater unless noted.

www.mobot.org/memberevents

Butterfly House





Both events free for members. Included with admission for nonmembers.

www.butterflyhouse.org









features

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There is still much to discover about aroids.

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Thank you! Your membership provides critical support for our international and local plant science and conservation work, and Garden memberships contribute 21% of our annual operating funds.

To learn more about the benefits of your membership, visit www.mobot.org/membership, email membership@mobot.org, or call (314) 577-5118.

hours and admission

For hours and admission prices at our three locations, visit www.mobot.org, www.butterflyhouse.org, and www.shawnature.org.

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on the cover

Araceae is one of the most diverse plant families. The Garden's aroid collection is considered one of the best in the world. Photo by Jered Willis.

credits

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To discover and share knowledge about plants and their environment in order to preserve and enrich life.

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from the president



Spring is a special time at the Missouri Botanical Garden, Sophia M. Sachs Butterfly House, and Shaw Nature Reserve. Birds chirping, flowers blooming, bees buzzing—experience nature's signs of spring in all their glory at our three beautiful sites.

If you're looking for a sampling of all the different outdoor experiences we offer, I invite you to the third annual Meet Me Outdoors In St. Louis event in April (see page 8). The two-day festival, held at our three sites, is an excellent way for visitors of all ages to reconnect with nature, learn about citizen stewardship opportunities, and celebrate the great outdoors. If you're coming to the Garden that weekend, don't miss the chance to sign up for a free behind-the-scenes tour of our greenhouses with two of our aroid experts. You'll learn all about this fascinating plant family and how the Garden built one of the largest aroid collections in the world (see page 14).

And speaking of collections, did you know that Garden founder Henry Shaw commissioned a museum to be built to house the Garden's original library, herbarium, and natural history specimens? The Stephen and Peter Sachs Museum, which had been closed for more than three decades, is reopening this spring after undergoing extensive restoration work and, most importantly, adding a separate entrance to make it accessible to everyone.

Institutions like the Garden have benefitted greatly over their history through a passion for collecting by many of its staff, leadership, and benefactors. Our thirst for knowledge has been fed and supported by these individual passions. As an avid collector myself, the Sachs Museum is near and dear to me because it represents the origin of the Missouri Botanical Garden as a scientific institution and because it will allow us to share some of the Garden's most precious collections with the world (see page 10).

Projects like the Sachs Museum would not be possible without your support. Our 47,000 member households—a new record—are what make our mission possible. Because of you, we're able to share our commitment to plant science and conservation with communities near and far (see page 16). Together, we are transforming landscapes and lives to build a better world.

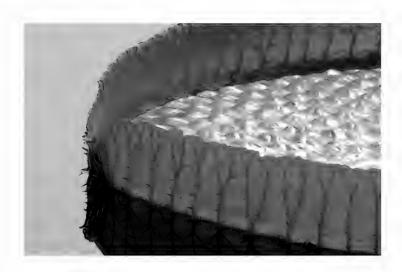
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what's new?



Victoria cruziana can reach up to 10 feet wide.

Extending Bloom Time With Heat

The Victoria pool in the Garden's Central Axis will now be heated, adding up to four months to the existing five months of growing time of Victoria cruziana. This giant plant is the largest member of the water lily family (Nymphaeaceae) and native to slow water areas of the Amazon River. Its pads can reach 10 feet wide and flowers can be as large as 2 feet. In order to reach their full potential size in the St. Louis climate, the Victoria water lilies require a growing season long enough to mimic conditions in the Amazon. The new heating pipes will provide supplemental heating when needed throughout the growing season, keeping the plants in continued active growth and allowing them to reach their maximum potential size.

Work made possible with a generous donation from Jeanie and Michael Gleason.

Board Elects New Officers

The new officers were elected at the meeting in December.





David M. Hollo

Catherine B. Berges Vice Chair

Ward M. Klein Vice Chair

Chair

The first plant display will be located just north of the Victorian Garden

Victorian District Work Starting This Spring

Work will begin this spring on the first of several new plant displays in the Lichtenstein Victorian District. The new displays will show the progression of landscape styles during the Victorian era, highlighting formal bedding, the wild garden, and the

cottage garden style. They will also illustrate the history of plant collecting and botanical gardens from the 1500s to the present.

Additional special funding opportunities for the Victorian District gardens are available. For more information, please contact Brenda Zanola, Major and Planned Giving Officer, at bzanola@mobot.org or (314) 577-0879.

Horticulture staff are working on the grounds, behind the scenes, and across the globe to identify and care for plants. Support their work and the beauty of the Garden with a special gift today! www.mobot.org/donate.

> Made possible with a generous donation from Dr. and Mrs. Carl E. Fichtel.

\$65,000

raised by the Young Friends of the Garden in 2017 for Doris I. Schnuck Children's Garden

The Young Friends of the Garden raised more than \$65,000 in 2017 to support the Doris I. Schnuck Children's Garden through five events. This brings the Young Friends total support of the Children's Garden to more than \$200,000 in four years. The Young Friends Council has already planned four events for 2018 to continue the success of this five-year commitment to our youngest visitors. The Garden is proud to recognize the Young Friends for this support and grateful for their impact. For more details, please visit www.mobot.org/youngfriends.

Celebrating Earth's Pollinators

Project Pollinator, a community gardening initiative, is celebrating two years of promoting an appreciation of all pollinators through education and the creation of pollinator gardens in St. Louis County. The Sophia M. Sachs Butterfly House leads this project in partnership with St. Louis County Parks, St. Louis County Libraries, and Greenscape Gardens. Project Pollinator is holding a free event on March 15 from 6:30 to 8:30 p.m. at the St. Louis County Library Headquarters. More information at www.butterflyhouse.org/projectpollinator.



The Missouri Department of Conservation presented the Garden with its Private Land Services Division Partners Award, which recognizes the Garden's role in the partnership with the City of St. Louis, Green City Coalition, Metropolitan St. Louis Sewer District, St. Louis Development Corporation, and Washington University (see page 16). The Garden helps to implement plant-based solutions benefitting urban parks, schools, and neighborhoods and to build capacity with residents toward citizen stewardship.

Garden's Grapes Display To Be Updated

The native grapevine display in the William T. Kemper Center for Home Gardening will be changing this spring. It is part of a multi-year project in partnership with Saint Louis University, Missouri State University, and the USDA's Agricultural Research Service, among others. The goal is to understand how rootstock grafting affects responses to stressful environmental conditions. This research may help inform sustainable agriculture practices for the future. The new display will feature native and cultivated grapes as well as experimental grapevines grafted on a specially designed cross of Missouri native rootstock (Vitis rupestris × Vitis riparia). Missourinative grapes have adapted to extremely hot and humid summers and cold winters and are tolerant of pests to which ungrafted cultivated grapevines are susceptible. To learn more, visit www.discoverandshare.org.

Work done thanks to a National Science Foundation grant.

47,105

new record number of member households

Look at you grow! The Garden's membership program is now more than 47,000 households strong—the biggest we've ever been! Thank you for all you do to support the Garden and our global mission.



Garden for the World Update

The Oertli Family Hardy Plant Nursery (pictured above) continues to make progress, with Phase 1 projected to be completed in late April and Phase 2 starting soon after. Major projects in Phase 2 will include construction of the head house and the exterior shade structure.

The Stephen and Peter Sachs Museum is set to reopen this spring. Closed to the public since 1982, except for special events such as Henry Shaw's birthday, the Sachs Museum now has a new addition on the east side that makes this historical building accessible to everyone. The newly recreated ceiling mural is truer to the original than ever before, and architectural features were also restored to create new exhibit space for some of the Garden's most precious collections (see page 10).

To learn more about these projects, visit www.mobot.org/fortheworld.

research news



Alanna Slack and Rebecca Sucher (right) lead seed collecting training in Mauritius.

Providing Training To Help Save Endangered Trees

In November, the members of the Garden's Horticulture team led a training session in Mauritius as part of the Global Seed Conservation Challenge by Botanic Gardens Conservation International (BGCI). The course focused on critically endangered trees, and it covered seed collection techniques, equipment needed for seed collection, and learning how to make an herbarium specimen.

Mauritius is considered a hotspot for rare and endangered species found nowhere else in the world. The small island has 24 tree species, each with fewer than 50 individuals reportedly remaining in the wild, which is why conservation of threatened trees there and in neighboring Madagascar is a priority for both the Garden and BGCI.

Herbarium Undergoes Retrofitting To Improve Access

From October to December of last year, 10 compactors in the Garden's Herbarium in the Lehmann Building were retrofitted from electrical to manual drives. After more than 40 years of use, the operational reliability and costly repairs to the electrical/motor-drive compactors had limited the access to 2.5 million out of the nearly 7 million herbarium specimens housed here. The Garden's Herbarium, one of the largest in the world, contains specimens that document the variety of plant life on Earth. It is an invaluable scientific resource used by Garden staff, students, and researchers from around the world. This infrastructure improvement continues the Garden's long-term commitment to provide safe and reliable access to the specimens under its care.

Visit the Herbarium and learn about the Garden's research during the Science and Sustainability Open House (see page 8).

Made possible through a grant from National Science Foundation.



There were a number of individuals labeled as *D. umbraculifera* growing in botanical gardens, including in the Garden's Climatron.

Genetic Tests Lead to Rediscovery

After using DNA testing, Garden researchers have discovered a plant thought to be extinct in the wild, Dracaena umbraculifera. A number of plants were labeled as D. umbraculifera from Mauritius growing in botanical gardens around the world, but the tests indicated *D*. umbraculifera is more closely related to Dracaena reflexa from Madagascar than to Mauritian Dracaena. Armed with that information, researchers conducted field expeditions in Madagascar, ultimately discovering five wild populations. They concluded the species' status under the International Union for Conservation of Nature (IUCN) Red List should be "Critically Endangered" rather than "Extinct."

This study highlights the importance of living collections in botanical gardens. The genetic analysis of these plants can play an important role in making new discoveries, especially with poorly known species. "It is particularly exciting because it is rare to have the opportunity to rediscover a species that hasn't been seen in the wild for 200 years," says Dr. Christine Edwards, Conservation Geneticist and lead author of the paper published in the journal *Oryx* earlier this year.

Floras vs. Catalogs vs. Checklists

Flora: comprehensive works that include descriptions, some synonymy and type information, references, specimen citations, maps, and illustrations.

Catalog: lists of species names with condensed information that may include synonymy, references, habit, habitat, elevation, distribution, and conservation status.

Checklist: simpler listings of species names and distributions.

Due to their similarity and conciseness, catalogs and checklists are often used interchangeably in the botanical community.

All Plants of the Americas In One Place

For the first time, scientists have an overview of all the vascular plants in the Americas. This is thanks to the efforts of Curator Dr. Carmen Ulloa, the lead author of the paper published in the journal Science in December. Dr. Ulloa, along with 23 co-authors, compiled a comprehensive, searchable checklist of vascular plants in the western hemisphere. The Garden's plant database, Tropicos®, was used as the project's data repository. "It represents not only hundreds of years of plant collecting and botanical research, but also the 6,164 botanists who described species that appear on this list," Dr. Ulloa says. "It is vital we have this information so that we know what each species is for conservation purposes."



of all known vascular plants worldwide

124,993 species

6,227 genera

355 families



World Flora Online Continues Progress

Garden representatives traveled to Paris in November for the latest meeting on the World Flora Online (WFO). There, it was determined that the WFO would populate the Catalogue of Life, a global database of the world's known species of

animals, plants, fungi, and micro-organisms. With the public portal now live at www.worldfloraonline.org, the WFO project is on track to meet its goal of providing a uniform baseline for the estimated 400,000 accepted plant species worldwide by the year 2020. The next meeting in June will take place in Colombia.

Made possible with the support of the Monsanto Company.



Mega Collector
Dr. Thomas Croat
Senior Curator

In 2007, Dr. Tom Croat, P.A. Schulze Curator of Botany, became one of a handful of botanists ever to collect 100,000 specimens. The specimen from Ecuador was a new species of gigantic *Anthurium* with leaves 4 feet long. Over the course of his 50 years at the Garden, Dr. Croat has collected plants from more than 30 countries and described at least 3,000 new species, most of them in the aroid family (Araceae). He is considered the leading aroid expert and has helped build the Garden's aroid collection into one of the largest ones in the world.

Dr. Croat lived in Panama in the 1960s and 70s working on an inventory of its flora. "I didn't know it at that time that I was collecting nothing but new species," he says. Today, he and his team of more than 25 volunteers continue describing new species.

On April 27, the *Flora of Panama* comes full circle, so to speak, as Dr. Croat delivers the 30th annual **John Dwyer Lecture in Biology** in the Shoenberg Theater at 4 p.m. The lecture honors the memory of Dr. John Dwyer, a professor of biology at Saint Louis University and research associate of the Garden. Dr. Dwyer had an interest in tropical plants, especially those in Panama. He and Dr. Croat worked together on several expeditions, and both contributed to the *Flora of Panama*, published between 1943 and 1981.

To learn more about the Garden's historical aroid collection, see page 14.

what can you do?



Come Grow with Us!

The Missouri Botanical Garden, Sophia M. Sachs Butterfly House, and Shaw Nature Reserve are more than just beautiful destinations. They are living classrooms that connect people of all ages to the wonderful world of plants—from cooking, painting, and photography courses to green living, outdoor exploring, and gardening classes.

Registration for the spring/summer session is now open, and we have a class for everyone. Now is the perfect time to learn a new skill, discover a new passion, or connect with the nature in a whole new way.

Look for your course catalog in the mail or visit www.mobot.org/classes.



Learn about the Garden's sustainability efforts.

Attend the Science and Sustainability Open House

On March 3 and 4 from 1 to 4 p.m., two of the Garden's rarely seen behind-the-scenes areas will be open to the public.

Meet our scientists at the Monsanto Research

Center and learn how they collect, study, and conserve plants. Tour our herbarium, which contains almost 7 million specimens, and visit the Peter H. Raven Library, one of the most comprehensive libraries of botanical literature in the world, including more than 6,500 rare books.

You can also learn about the Garden's sustainability programs by joining EarthWays Center staff at the Commerce Bank Center for Science Education. Meet the team that educates and connects people to 20+ programs in the community. Discover how the Garden is making St. Louis greener, with environmental classes and programs for schools, businesses, individuals, and families.

The two locations are across the street from each other, just a couple of blocks west of the main Garden entrance. You can park at the Garden or at either of the two sites and walk to both places. The event is free and open to the public. For more info, visit www.mobot.org/openhouse.



Take The City Nature Challenge

The City of St. Louis and the Garden's BiodiverseCitySTL network will join 64 other cities around the world in the third annual City Nature Challenge happening April 27–30. The competition, organized by the citizen science team at iNaturalist, aims to see which city and/or region can document the most species over a four-day period. The two primary goals of the STL City Nature Challenge are to increase eco-literacy and collect urban biodiversity data. For more information on how you can participate, visit www.inaturalist.org.

Sake and Sakura

Celebrate the beauty of spring and the season of *hanami* by sipping sake under the cherry blossoms (*sakura*) in the Japanese Garden on April 7 from 5:30 to 8 p.m. Specialists will be on hand to guide your sake sampling adventure. Attendees will receive a keepsake tasting cup and will have the rare opportunity to explore Teahouse Island. Five sake samples are included with admission. Additional sake and traditional Japanese cuisine will be available for purchase. \$20 members; \$25 nonmembers. Tickets and information at www.mobot.org/events.

Have a scout in your family?

Would they like to work on scouting awards while having fun at Shaw Nature Reserve?

Check out the all-new Scout Day on May 19 from 10 a.m. to 1 p.m. The event is open to all St. Louisarea scouting organizations and families, and it includes scouting award work with Garden professionals, nature and STEM-based activities with partner organizations, tree climbing, and more.

\$5 per person, ages 3 and up. Information and registration at www.mobot.org/scouts. Pre-registration required by May 11.







The Butterfly House is going through a metamorphosis! Join us for a celebration of the last 20 years and help us roar into the next 20! Save the date for June 23 and toast to us as we enter a new age of prosperity at the Butterfly House. Proceeds will support the building of a new, expanded entomology lab. More information at www.butterflyhouse.org/gala.

Grab Your Shoes and Run with the Garden

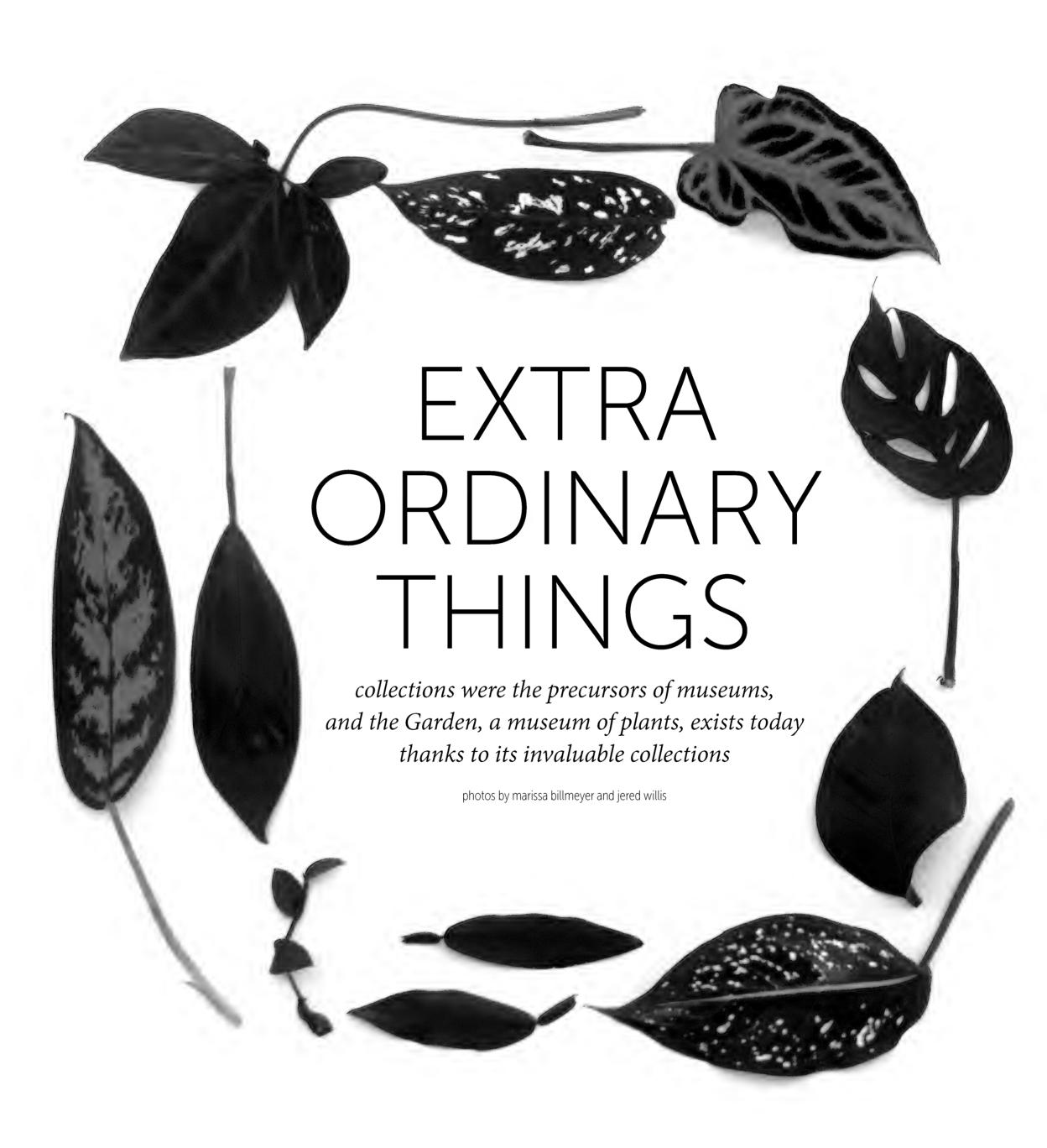
Don't miss these fun 5K runs surrounded by

nature's stunning landscapes. For tickets and more information, visit www.mobot.org/run. Advance registration required.

Daffodil Dash April 7 | 9–10 a.m. | Shaw Nature Reserve \$20 members; \$24 nonmembers. All proceeds benefit Shaw Nature Reserve. Tulip Trot
April 29 | 7–9 a.m. |
Missouri Botanical Garden
Presented by Macy's.
\$30 members and
virtual runners; \$40
nonmembers.

Run, Walk, Stretch!
August 19 | 7–9 a.m. |
Missouri Botanical Garden
New! Join the Garden
and YogaBuzz for a
healthy morning of
running, walking, and
yoga. \$30 members and
virtual runners;
\$40 nonmembers.

9





(left) Collecting, curating, and organizing the range and diversity of the plant world is no small task, but it is at the core of the Garden's mission. The Garden's living collections encompass thousands of plant specimens maintained by the Garden's horticulturists, and they include common and familiar plants as well as rare and endangered species from across the world.

(above) Many, many thousands of plants are used by people. Food plants alone number well over 20,000 species. Additionally, plants are used for medicines, oils, latex, resins, perfumes, fibers, dyes, tannins, ornamentals, and many more products. These plant artifacts make up the Garden's biocultural collections, which are organized both by plant species and by artifact.

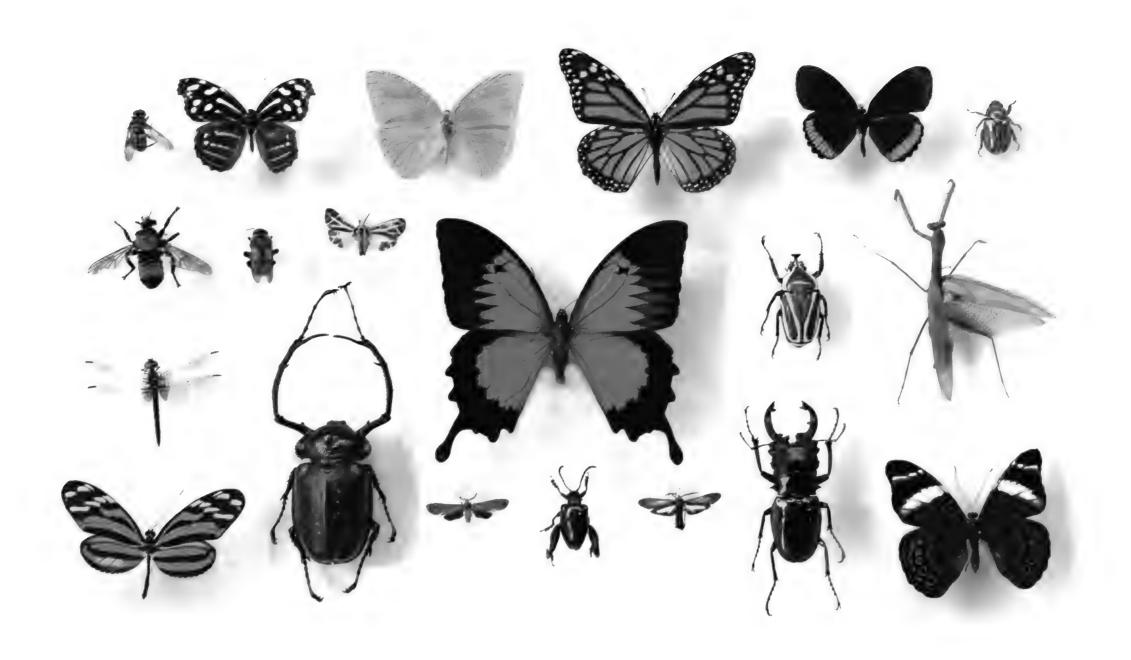
"In my opinion, the most ordinary things, the most common and familiar, if we could see them in their true light, would turn out to be the grandest miracles of nature and the most marvelous examples, especially as regards the subject of the action of men."

Michel de Montaigne (1533–1592)

Throughout history, people have been driven to collect objects, from sea shells and acorns to baseball cards and paintings. Objects are usually displayed in an organized way meant to make sense of the world or inspire wonder. You may have a collection of your own and not think of it as something of value beyond your personal enjoyment. But did you know that private collections were the precursors of museums?

Collections start with the drive to seek, sort, and preserve interesting things. No matter what the objects are, collecting is a natural part of the human experience. During the Renaissance, as Europeans discovered new people and places, they amassed large collections of objects, particularly those found in nature. Early "natural philosophers," the forerunners of today's scientists, often collected "curiosities" so they could study them.

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There's more to the Sophia M. Sachs Butterfly House than butterflies. Its mission is "to foster a greater understanding of plant and animal relationships in the environment in order to promote the conservation and restoration of natural habitats." This is reflected in its collections—alive and dried—of insects of all kinds that play important roles in keeping ecosystems healthy.

By the 17th century, the word "museum" had come to describe these collections of curiosities. During the Victorian era—Henry Shaw's time—entire rooms were dedicated to displaying these collections. Curiosity cabinets, as they were known, represented a miniature version of the world. In the case of natural objects, private collections first became natural history museums and research collections.

Past Meets Present

The Stephen and Peter Sachs Museum reopens to the public this spring after more than a year of construction and rehabilitation work. Closed to the public since 1982, the museum is one of the Garden's most iconic buildings, with a strong connection to Garden founder Henry Shaw's vision for the Missouri Botanical Garden.

When Shaw sought advice from Sir William Jackson Hooker, director of the Royal Botanic Gardens, Kew, to create a world-class botanical institution, Hooker advised him to create a library and museum to support the Garden's botanical scientific research. The museum, which opened in 1859, housed the Garden's original library, herbarium, and natural history specimens.

When Shaw's scientific advisor George Engelmann traveled to Europe in 1857, he purchased approximately 62,000 herbarium specimens from the Jacob Bernhardi estate. This herbarium collection, along with other botanical books he brought back to the Garden, were the first collections housed in the museum. Through the years, other collections were added, including taxidermy from the Western United States, seeds, pinecones, fungi, items from around the world made of plant material, and economic botany items. Over time, the museum was used for meetings, office space, and even a restaurant until it closed to the public for safety reasons.



The Garden and St. Louis's rich histories are intrinsically connected. Henry Shaw's historic collection, on display at Tower Grove House, helps share the unique journey of a man building a cornerstone in the community. Items like the fine silverware represent the era in which the Garden began to grow, feeding some of St. Louis's most historically influential people.

When Dr. Peter Wyse Jackson became president of the Garden in 2010, he recognized the building's historical importance and called for its renovation and restoration. By returning to its roots of housing some of the Garden's most precious—and curious—collections, the renovated space will deepen understanding among visitors of the importance of plants and provoke critical thinking about sustainability, biodiversity, and other topics. Displays will include materials and artifacts in the Garden's collections not currently available to the public. The collections include exquisite botanical art as well as objects and new discoveries collected through the Garden's research and conservation programs around the world.

Collect and Share

Do you collect something? Share photos of your collections using the hashtag #collectandshare or visit www.mobot.org/collections.

"The Garden's collections represent one of the finest botanical research centers and richest assemblages of plants in the world. Their diversity makes possible so much of the Garden's scientific research, plant conservation, and education."

Dr. Peter Wyse Jackson

Museum Grand Reopening

Saturday, April 28 | 6:30–8 p.m. Join Dr. Peter Wyse Jackson for the grand reopening and ribbon-cutting of the Sachs Museum. View the new amenities and the restoration of the historic structure. Free and open to the public; no registration required.

Spring 2018 Missouri Botanical Garden *Bulletin* 13



An Anthurium andraeanum, commonly known as "flamingo flower," displaying its bright and colorful red spathe in the Garden's Climatron.

it's all in the FAMILY

while they may seem common, there is still much to discover about aroids

If you have any houseplants, chances are at least one of them is an aroid. Anthuriums, peace lilies, pothos, and Chinese evergreens are some of the most common houseplants. They may appear to be different, but if you look closely, they have the defining characteristics of the plants in the aroid family, Araceae: an usually colorful spathe and a finger-like spadix, technically known as the inflorescence or commonly referred to as a "flower."

Aroids make excellent houseplants. They require minimal care and have very attractive foliage. This plant family is also one of the most diverse. It includes terrestrial and aquatic plants, climbers and epiphytic ones, ones with large leaves and ones with leaves smaller than the size of a quarter. They are found in many parts of the world, with the majority of them found in the New World tropics. They are, however, understudied. "The aroids still remain, after my 50 years studying them, the single most poorly known family that I know of—and I know a lot of families," says Dr. Tom Croat, P.A. Schulze Curator of Botany and one of the world's leading experts in Araceae (see page 7).



Collecting, growing, and studying hundreds of aroids at the Garden is truly a team effort. (from left) Dr. Monica M. Carlsen, Assistant Scientist and Education Coordinator; Steve Aylward, volunteer; Emily Colletti, Horticulturist; Dr. Tom Croat, Senior Curator; Carla Kostelac, Research Specialist; David Belt, volunteer.

The Garden and Aroids

The first photographic evidence of live aroids at the Garden is dated 1898. Over the years, the collection has grown to more than 3,000 plants representing almost 60 genera and more than 700 species living both on grounds and in the greenhouses. There are over 80,000 dried specimens in the Herbarium, with hundreds more waiting to be identified and cataloged for future research. Together, the two collections represent one of the most comprehensive tools in the world available to study Araceae.

Many plants in the living collection remain unidentified and are likely new to science. There have been times when new aroid species were first discovered in the greenhouse because many of the collections were brought back from the wild as sterile or young plants. "With most of the areas where I was collecting being destroyed," says Dr. Croat, "it was useful to salvage the living material for study." He visits the greenhouse frequently, focusing on the "unidentified" section, to pull specimens to bring back to his office. There, he and a team of volunteers will compare the living plant with the dried herbarium specimens and determine if it's a new species.

Horticulturist Emily Colletti has worked alongside Dr. Croat for the past two decades caring for the living aroid collection. She has come to know each plant very well, understanding that while aroids are easy to grow (remember those popular houseplants?), they do require unique conditions to thrive. Some plants do well in the Climatron while others do better in the greenhouses, for example. More importantly, Colletti notes, maintaining and growing the living aroid collection is crucial because their seeds can't be frozen or stored long-term for future research and conservation purposes. "These living specimens are all we have, and in some cases, they may be the last of their species," she says.

STINKY AROIDS

While you may be familiar with the aroids in your house, this family has other notable species, including the corpse flower, or titan arum (Amorphophallus titanum). This infamous smelly bloom, considered a giant in the aroid family, blooms only rarely and under just the right conditions. The Garden has in cultivation three of blooming size and a dozen smaller, newly propagated specimens of this species, which is rare in the wild. Since 2012, the Garden has hosted an unprecedented eight flowerings, the latest in 2017.

The titan arum genus (*Amorphophallus*) also provides interesting research opportunities regarding odors. A study published in 2017 found a great variety of odors in the genus, including some that resemble those of rotting meat, fish, cheese, anise, or even fruits. A recent collaboration with Maryville University has also opened another area of research using the Garden's collections to study the role of smell in plant reproduction.

To learn more about other stinky aroids in the Garden's living collection, visit www.discoverandshare.org.



See Them

Go to the Climatron, William T. Kemper Center for Home Gardening, English Woodland Garden, Linnean House, and Shoenberg Temperate House.



Learn More About Them

Take a tour of the Garden's historical aroid collection during Meet Me Outdoors In St. Louis on April 7 and 8.



Grow Them

Gardening help is available at www.mobot.org/gardeninghelp and by calling (314) 577-5143 Monday through Friday from 9 a.m. to noon. The Garden Gate Shop also has aroids for your house and books on houseplant care.

Support Horticulture and the Beauty of the Garden

Horticulturists work on the grounds, behind the scenes, and across the globe to care for plants. Support their work by making a special gift at www.mobot.org/donate.



PLANTS connect us all

seizing every opportunity to cultivate a love for nature

Our Lady of the Holy Cross was built in 1909 in the historical Baden neighborhood in North St. Louis City. More than a church, it is a community hub for its residents. Since 2015, the church has also been a key partner of the Garden, Missouri Department of Conservation, Metropolitan St. Louis Sewer District, Washington University, and other community organizations in the efforts to address flooding problems and revitalize neighborhoods by turning flooding-prone vacant lots into vibrant green spaces.

Over the years, community leaders witnessed how some of the Garden-led projects—a community garden and planting native trees at the local park—can bring people together, connect them to nature, and improve the community's well-being. So this year, Revitalization of Baden is taking the lead in turning underutilized green space, including the church grounds, into biodiversity-rich landscapes. "The Garden staff's enthusiasm, which is so often on display as they collaborate with area residents, is truly an inspiration to all of us," says Father Vince Nyman, pastor of Our Lady of the Holy Cross church.

That enthusiasm shows because at the Missouri Botanical Garden, we love plants. Actually, we're obsessed with them. This obsession crosses species (and genus and family), spans the globe, and is unparalleled in scope. In fact, the Garden is one of just a handful of entities on the planet working on the front lines to discover, document, restore, and conserve life on Earth, specifically plants, before it's too late.

It is thanks to partnerships like this one in the Baden neighborhood that we are able to share our mission in the community. We share this love with you and millions more every year through experiences—both formal and informal—designed to engage, educate, and inspire. It is through its unique, intentional, and potent combination of plant science, horticulture, sustainability, education, and outreach that the Garden effects lasting change in communities in which it works.

But we can't do it alone. We—us, you, our friends and family, our neighbors, even strangers we've never met—need to make a sharp turn toward a better, more sustainable world for all. The status quo just isn't cutting it. Masses of us must start shifting our choices, decisions, lifestyles, habits, priorities, roles, and responsibilities as citizens of the world, and quickly. The Garden continues to build upon its core commitment to plant science and conservation to work with people and communities near and far. We see a more diverse, colorful, thriving, living world on the horizon—and we invite everyone everywhere to join in so we can get there together.

Together and today, we can transform landscapes and lives in ways that achieve greater quality of life for all. Every single one of us is—or can be—a citizen steward. Sometimes all it takes is to plant the seed. "We very much appreciate the effort made by those who have participated in the garden programs in this area," Father Nyman says. "We cannot thank you enough."

A Garden-led program in 2016 where the Baden community came together to plant native trees in Dickman Park.

just for members











Member Speaker Series: Tower Grove Park Past, Present, and Future

March 13 | 11 a.m.-noon
Bill Reininger, Executive
Director of Tower
Grove Park, will discuss
the Park's history, its
connections to the
Garden, and plans for
the future. Reservations
required; space is limited.

Eggstravaganza

March 24 | 9:30 a.m.-noon
Join us for a membersonly egg hunt! Egg
hunts are offered every
30 minutes and are
divided by age group
(2-3 years, 4-6 years,
and 7-12 years). Includes
refreshments and pictures
with Hopsy, the Garden
bunny. Don't forget
your basket for the egg
collecting! Reservations
required.

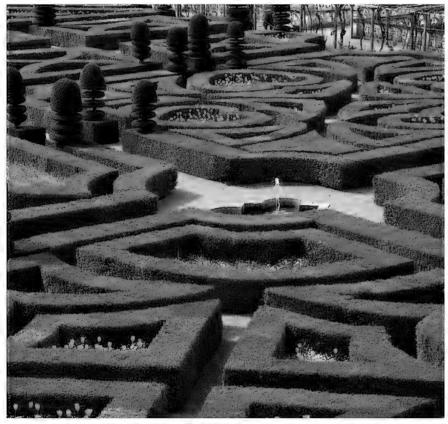
Member Speaker Series: Seasonal Bulbs April 10 | 11 a.m.-noon |

Shoenberg Theater
Jason Delaney, owner of
Professional Horticulture
Services and former
Garden horticulture
supervisor, will offer tips
for selecting, planting,
and designing with a
variety of his favorite
perennial flowering bulbs.
Reservations required;
space is limited.

Herb Days Member Night

April 26 | 5–8 p.m. |
Ridgway Visitor Center
Shop more than 120
new and hard-to-find
varieties of herbs. Live
music, tastings, and other
activities included. Free
and for members only.

photos by Kari R. Frey, Mary Lou Olson, Jessika Du, Suzann Gille, and Karen Fletcher













Member Speaker Series: French Kitchen Gardens from Versailles to Villandry May 8 | 11 a.m.-noon | Shoenberg Theater Join Dr. Eric T. Haskell, Director of the Clark Humanities Museum, for a look at the history and aesthetics of historic French kitchen gardens, known as potagers.

Reservations required;

space is limited.

Little Shop Around the Corner Member Open House May 10 | 10 a.m.-6 p.m.

May 10 | 10 a.m.-6 p.m.
For members only!
Stop by the Little Shop
Around the Corner Open
House for 40% off all
high-quality antiques
and collectibles. Light
refreshments provided.

Shaw Wildflower Market Member Preview

May 11 | 2-7 p.m. |

Shaw Nature Reserve
Members enjoy first pick
of hundreds of varieties
of Missouri native
wildflowers, trees, and
shrubs. Enjoy local food
and beverages, craft and
garden tool vendors, as
well as live music. Free
and for members only.

Member Speaker Series: All About Annuals May 24 | 11 a.m.-noon |

Shoenberg Theater
Join Garden horticulturist
Josh Higgins for a look
at some new and most
reliable annuals, and
learn how to select,
grow, and integrate them
into your home garden.
Reservations required;
space is limited.

Orchid Nights March 8 and 22 | 6-8 p.m. Ridgway Visitor Center

Exclusive lighted viewings of the Orchid Show, live music, wine tastings, and a cash bar. Ticket includes choice of one signature cocktail or one beer/wine. \$15 members; \$20 nonmembers. www.mobot.org/orchidshow.



Now-March 31 (closed Mondays) 10 a.m.-3 p.m. | Butterfly House

Bring your Krewe to the carnival!
Join the party, see bugs on parade,
make a masquerade mask, and
immerse yourself in a sea of blue
as we fill the tropical conservatory
with thousands of blue morpho
butterflies.

Included with admission.



Herb Days

April 27–28 | 9 a.m.–5 p.m.
Orthwein Floral Display Hall
Presented by the St. Louis Herb Society
Shop more than 100 varieties of
herbs! Included with admission;
free for members. Members also get

first pick on April 26 (see page 19).



Pollinator Plant Sale-NEW!

Chinese Culture Days

April 21-22

This annual celebration features a Grand Parade

with 70-foot dancing dragon, authentic regional

cuisine, interactive dance and acrobatics, and special

tours in the Grigg Nanjing Friendship Garden.

\$7 members; free for Festival level and above;

free for member children; \$15 nonmembers;

\$7 nonmember children (ages 3–12).

www.mobot.org/chineseculturedays

April 7–8, 14–15, and 21–22
11 a.m.–3 p.m. | Butterfly House
Let our experts help you plan your
garden with native plants that
benefit butterflies, bees, and other
pollinators. All plant sale proceeds
benefit Project Pollinator (see page
9). Free for members; included
with admission for nonmembers.

Tulip Trot

April 29 | 7–9 a.m. *Presented by Macy's.*

Join the Young Friends for a spring morning fun run. Follow a 5K course through the Garden at your own pace; no clock, no winners. All participants receive an event run shirt. \$30 members and virtual runners; \$40 nonmembers. Advance registration required: www.mobot.org/tuliptrot.



Grapes in the Garden

May 11 | 5:30 – 8:30 p.m.

Presented by Schnuck Markets, Inc.

Join us for a special evening at

Join us for a special evening at the Garden and sample fine wines and gourmet foods. Attendees must be at least 21. \$35 members; \$45 nonmembers; \$15 designated driver. Tickets required: www.mobot.org/grapes.



May 18 | 6–9 p.m.

Fest-of-Ale moves to the spring for the 11th annual celebration of local brews. Ticket price includes commemorative tasting glass, unlimited sampling, and live music. Food for purchase. Attendees must be at least 21. \$30 members; \$40 nonmembers; \$15 designated driver. Advance registration required: www.mobot.org/festofale.

photos by Wesley Schaefer, Sundos Schneider, Karen Fletcher, and Jessika Du

shop & dine

From gardening tools and unique toys to vintage items and local products, the Garden shops have just what you're looking for. Look for these icons to know where each event or sale is taking place.



Garden Gate Shop

4344 Shaw Blvd. St. Louis, MO 63110 Monday-Sunday 9 a.m. to 5:30 p.m. (314) 577-5137



Butterfly House Gift Shop

15193 Olive Blvd. Chesterfield, MO 63017 Tuesday-Sunday 10 a.m. to 4 p.m. (314) 577-9477



Little Shop Around the Corner

4474 Castleman Ave. St. Louis, MO 63110 Tuesday-Saturday 10 a.m. to 4 p.m. Sunday, noon to 4 p.m. (314) 577-0891

Member Rewards Card at the Butterfly House

Did You Know Did you know that, in addition to the Garden Gate Shop, you can use your Member Rewards Card at the Butterfly House Gift Shop? For every \$25 you spend at both shops, you earn a punch. A fully punched card is worth \$40 in either shop. Special events when members earn double punches are sitespecific. Look for the symbols a in the calendar insert.

First Fridays

First Friday of the month | **

Discover something new—from book signings to food samplings to trunk shows. More at www.mobot.org/shop.

Around the World Wine Dinners

Third Thursday of the month | March-October | 6:30 p.m. | Spink Pavilion

Travel to wine-producing regions through a five-course dinner paired with a different wine from the same region. \$70 (plus 18% service charge and tax). Advance reservations required: (314) 577-0200.

Café Flora

March 25-October 28 | 10 a.m.-2 p.m. | Saturdays and Sundays | Spink Pavilion Enjoy a delicious brunch at the iconic Spink Pavilion. Call (314) 961-7588 ext. 265 for more information.

Special Brunches at Sassafras

Easter | April 1 | 10:30 a.m.-2 p.m. Mother's Day | May 13 | 10 a.m. – 3 p.m. Celebrate these special days with brunch at Sassafras, the Garden's café. Price per event: \$34.95 adults, \$15.95 children (ages 5 to 12). Ticket includes same-day admission to the Garden. Advance reservations and payment required: (314) 961-7588 ext. 265.

Member Double Days

April 8–9 | **₩** 🔊 🧸

All Garden members receive 20% off purchases or double card punches.

Little Shop Around the Corner After Tax Sale

April 17-22 | 🧸

Members receive an additional 10% discount and nonmembers enjoy 10% off their purchases (no additional discounts apply). See shop for details.

Bookworm Brunch:

Featuring Rainbow Fish–New!

April 22 | 9–10:30 a.m. or noon–1:30 p.m. **Butterfly House**

Rainbow Fish will be making a splash as we read a story, eat yummy food, and learn about awesome aquatic animals through crafts and activities. \$15 members; \$20 nonmembers; ages 12 months and under are free.

Staff and Volunteer Sale

June 6-8 | 😻 🔊 🧸

As a "thank you" for making the Garden a world-class institution, all Garden staff and volunteers receive an extra 10% off their purchases.

Trunk Shows

Green Earth Art | March 24–25 | ₩ Lisa Lohman | May 12−13 | ₩ Stop by from 10 a.m. to 4 p.m. and shop our popular trunk shows.

Little Shop Around the Corner Members Open House Sale

May 10 | 10 a.m.-6 p.m. | 🗸

Members enjoy extended shopping hours and 40% off their purchases (no additional discounts apply). See page 19 for more details.

» staff pick

Butterfly Ornament



Add a touch of blue to celebrate the beautiful Morpho butterfly with a glass ornament. This handmade glass piece

is a lovely seasonal accent for your home. Only \$15 with any purchase exclusively at the Butterfly House Gift Shop. While supplies last.

commemorative gifts

October–December 2017. A commemorative gift is a wonderful way to honor family and friends. Gifts of \$50 or more are listed in the Bulletin. For more information about giving opportunities at the Missouri Botanical Garden, please call (314) 577-5118 or make a commemorative gift at www.mobot.org/tributes.

In Honor of

The 1969 Notre Dame "Girls"

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John Behrer

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In Memoriam: Emily "Nini" Keyes Barksdale

We honor the passing of Emily "Nini" Barksdale, wife of Emeritus Garden Trustee Clarence "Cedge" Barksdale. Nini and Cedge have been champions of the Garden for more than 50 years. Through that time, they have been generous members, campaign supporters, and welcome guests at special events. Cedge has been providing leadership through the Board of Trustees since 1964. Nini brought a special brightness to receptions and fundraising galas with her warm and gracious nature.

In addition to her enthusiastic support of the Garden, Nini served our community as a board member of the Junior League of St. Louis and the Woman's Exchange, where she also volunteered. The Garden is grateful for Nini's decades of friendship.

23



The Missouri Botanical Garden strives to make the most custainable choices possible to behight peroper plants and the planet. That swiny we often an interactive oncoe version of the Burvetin as well as a down loadable PDF Light up by sending an email to membership amobations. It was known by your diske to fine the property of the form.

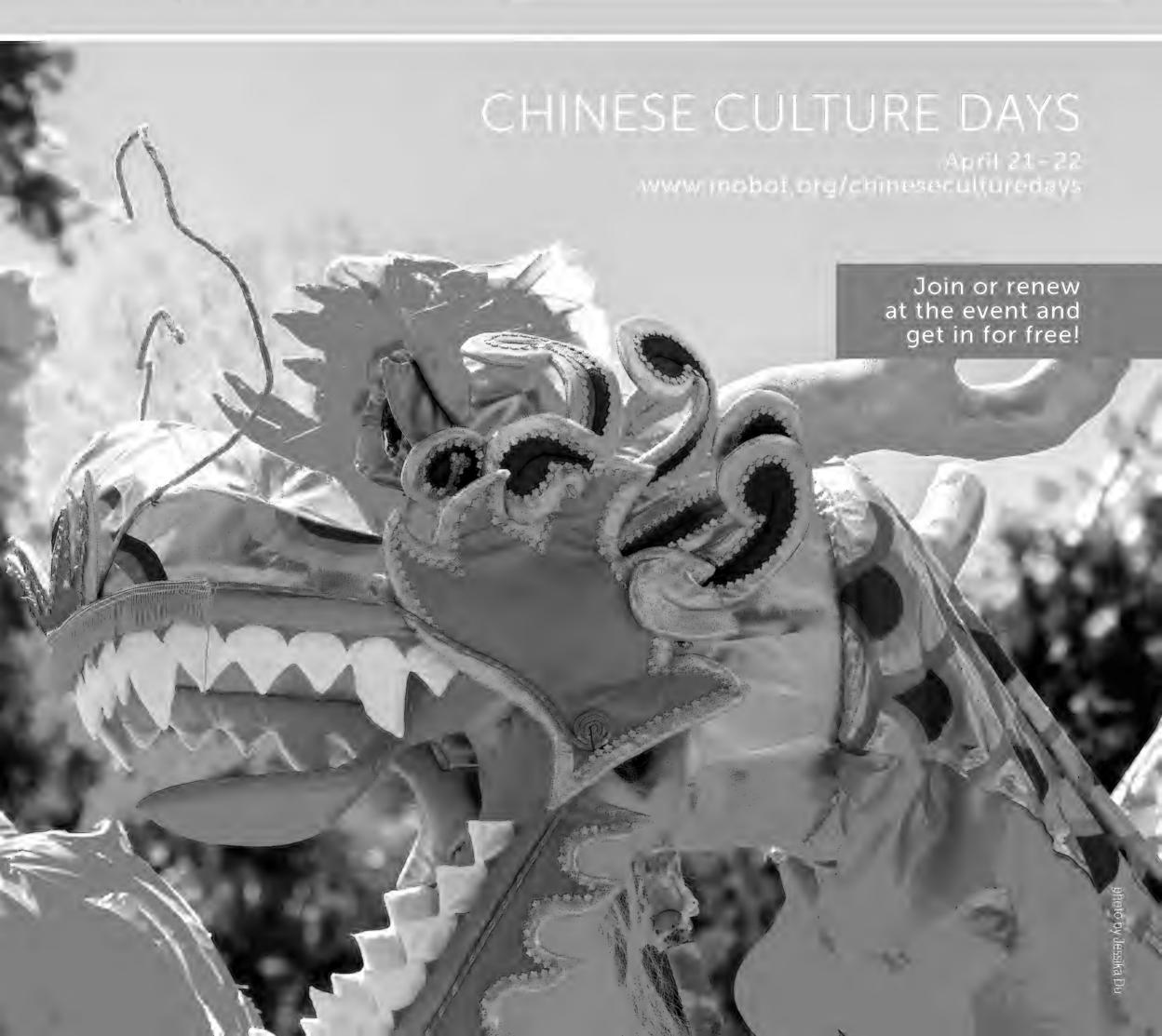
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Eggstravaganza



March 24 | 9:30 a.m.-noon

Join us for a members-only egg hunt! Egg hunts are offered every 30 minutes and are divided by age group. Reservations required.

www.mobot.org/memberevents

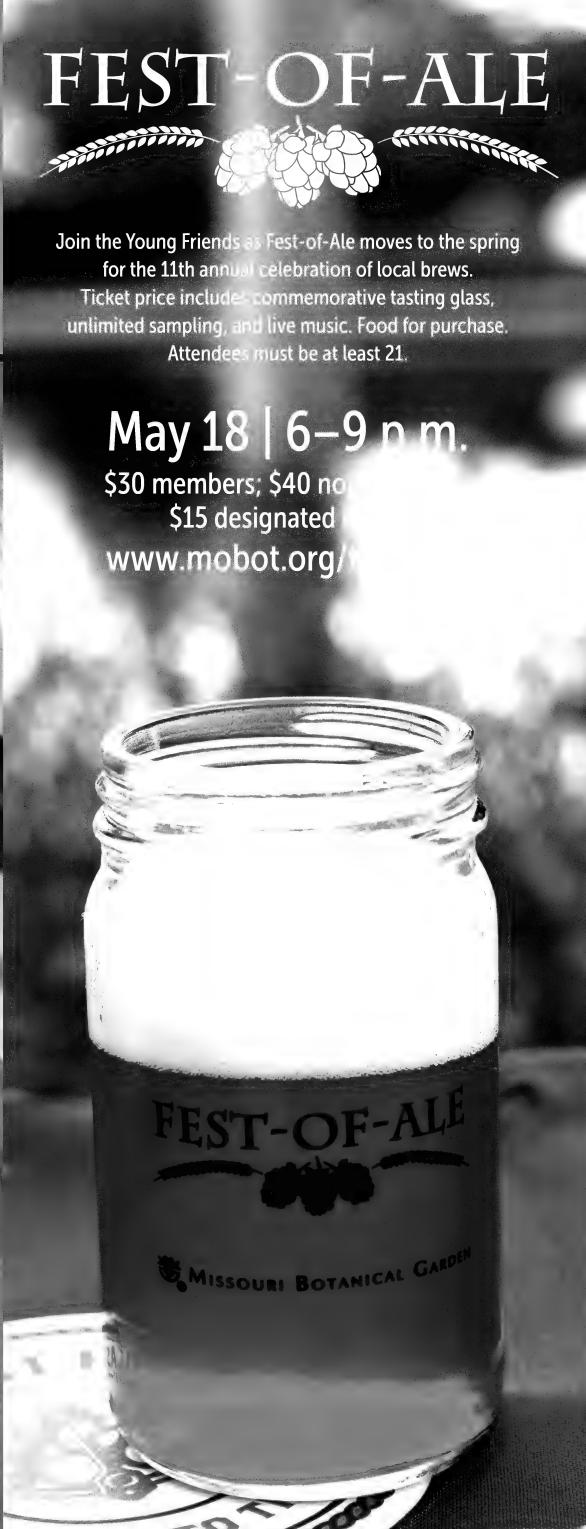


calendar

www.mobot.org/events

march | april | may





Spring Wildflower Sale

al Africo Nathuro Reservo

May 12 | 9 a.m. - 2 p.m. Aimbio Process | May 11 | 2 - 7 n.m.



www.shawnature.org

march 2018

average temperature: low 36° | high 55° average precipitation: 3.6 in.

What's in bloom?









2/1-3/31	Morpho Mardi Gras through March 31 (closed
	Mondays) 10 a.m.–3 p.m. BH

Science and Sustainability Open House | 1–4 p.m. 3/3-3/4

/13	Member Speaker Series: Tower Grove Park
	Past, Present, and Future 11 a.m. – noon ☎ 🗐 ST

3/22 Orchid Nights | 6–8 p.m. | \$ RVC

3/24

🕸 Member Event: Eggstravaganza
10 a.m.−1 p.m. ☎ 📵

Café Flora Opens | through October 28 | 10 a.m. – 2 p.m. | Spink Pavilion



april 2018

average temperature: low 47° | high 67° average precipitation: 3.69 in.

What's in bloom?

Gentian







Tall bearded iris	Large-flowered bellwo

4/1	Easter Brunch 10:30 a.m., noon, and 1:30 p.m.
4/7–4/8	Meet Me Outdoors in St. Louis 10 a.m. to 3 p.m. MBG, BH, SNR
4/7	Sake and Sakura−NEW! 5:30−8 p.m. ☎ \$
4/7	Daffodil Dash 9 a.m. ☎ \$ SNR
4/7-4/8	Pollinator Plant Sale—NEW! 11 a.m.—3 p.m. Free for members BH
4/8-4/9	Member Double Days 20% off purchases or double card punches GGS
4/10	Member Speaker Series: Seasonal Bulbs 11 a.mnoon ☎② ST
4/14-4/15	Pollinator Plant Sale—NEW! 11 a.m.—3 p.m. Free for members BH
4/17-4/22	Little Shop Around the Corner After Tax Sale LSAC
4/21-4/22	Chinese Culture Days 9 a.m5 p.m. \$
4/21-4/22	Pollinator Plant Sale–NEW! 11 a.m.–3 p.m. Free for members BH
4/22	Bookworm Brunch with Rainbow Fish–NEW! 9–10:30 a.m. or noon-1:30 pm ☎ \$ BH
4/26	Member-Only Shopping Hours: Herb Days

9 a.m. – 5 p.m. | RVC

4/27-4/28

Herb Days | *Presented by the St. Louis Herb Society.*

John Dwyer Lecture in Biology | 4 p.m. | ST

Tulip Trot | Presented by Macy's. | 7–9 a.m. | ☎ \$

may 2018

average temperature: low 57° | high 76° average precipitation: 4.11 in.

What's in bloom?







Dog fennel

Marigold

5/6	Fancy Tea with Mommy and Me 10-11:30 a.m. or
	1–2:30 p.m. ☎ \$ BH

Member Speaker Series: French Kitchen
dens from Versailles to Villandry m.–noon කුම් ST

5/10	Member Event: Little Shop Around the Corner
	Members Open House Sale 10 a.m6 p.m. LSAC

5/11	Grapes in the Garden Presented by Schnuck
	<i>Markets, Inc.</i> 5:30−8:30 p.m. ☎ \$ RVC

5/11	Shaw Wildflower Market Member Preview
	2–7 p.m. SNR

5/12	Shaw Wildflower Market 9 a.m2 p.m.
	Free for members SNR

5/13 Mother's Day Brunch | 10 a.m−3 p.m. **a** \$ *****

5/18	Fest-of-Ale 6–9 p.m.	क \$
-		

Whitaker Music Festival | 7:30 p.m. | CA

5/24	Member Speaker Series: All About Annuals
3/24	11 a m –noon l 電 ST

Whitaker Music Festival | 7:30 p.m. | CA

your garden



How do I prune a wisteria vine?

Wisteria may be grown as a vine, a tree, or a shrub. Pruning to stimulate flowering can be time-consuming, but once mastered, it can become part of your regular pruning chores. One caution: over watering or over-fertilizing reduces the chance of getting a wisteria to flower. The best times for light feeding are in late winter or mid-spring.

Pruning should begin with the removal of all dead, broken, diseased, or problem limbs. If it's a young plant, train it by thinning the number of shoots and cutting back lateral branches in order to develop the desired size and shape. Pruning in late winter or early spring before growth begins is good for training a young plant. The most damage may be created by pruning immediately after new growth begins in the spring.

Once your wisteria has grown to its desired size, regular summer and a late winter pruning is required. Begin by cutting the new shoots back to half the length when they are about 2 feet long. New shoots will grow from these 1-foot "stubs." Cut these new shoots back by half when they are 2 feet long. Continue pruning this way throughout the summer. In late winter, cut back the entire shoot that grew the past year to within 4–6 inches from the main stem. Regular summer pruning encourages the flower buds to form close to the main stem. Late winter pruning preserves the flower buds but reduces the number of buds that will develop foliage in the coming year.

More advice and tips at www.mobot.org/gardeninghelp.



Plant Societies' Shows and Sales

Get the latest information about your favorite plant society's show and sale by visiting www.mobot.org/plantsocieties.

Key (All events take place at the Garden unless otherwise noted.)

BH	Butterfly House
BHGS	Butterfly House Gift Shop
CA	Cohen Amphitheater
CBEC	Commerce Bank Center fo
	Science Education

CHD Children's Garden CL Climatron lawn

Little Shop Around the Corner Monsanto Research Center Monsanto Hall (in RVC) RVC Ridgway Visitor Center SNR Shaw Nature Reserve Spink Pavilion ST Shoenberg Theater (in RVC)



photos by (front) Jessika Du, Kat Niehaus, Lisa Delorenzo Hager, and Wesley Schaefer. (this page) Karen Fletcher and Lisa Delorenzo Hager

GGS Garden Gate Shop JE Jordan Education Wing (in RVC)

OULLETIN MISSOURI BOTANICAL GARDEN Summer 2018 Vol. 106, No. 3 mobot.org





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The Butterfly House's 20th anniversary

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A nighttime multimedia experience

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- 22 commemorative gifts

Thank you! Your membership provides critical support for our international and local plant science and conservation work, and Garden memberships contribute 23% of our annual operating funds.

To learn more about the benefits of your membership, visit mobot.org/membership, email membership@mobot.org, or call (314) 577-5118.

hours and admission

For hours and admission prices at our three locations, visit mobot.org, butterflyhouse.org, and shawnature.org.

contact

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on the cover

Indian paintbrush (*Castilleja coccinea*) is a Missouri native that occurs in prairies, rocky glades, moist and open woodlands, thickets, and streambanks. Photo by Bailie Fischer.

credits

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To discover and share knowledge about plants and their environment in order to preserve and enrich life.

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from the president



The Missouri Botanical Garden, Sophia M. Sachs
Butterfly House, and Shaw Nature
Reserve are buzzing with fun this summer. One need to look no further than our event calendar to find something for everyone (see pages 8 and 18). We have longtime favorites returning to the

Garden, such as the Whitaker Music Festival and Green Living Festival, but we also have new offerings the Butterfly House and Shaw Nature Reserve. From Summer Buggin' Nights to the WildFlower Concert Series, the possibilities to enjoy nature in the summer are endless!

This year marks two special anniversaries for the Garden family. The Butterfly House is celebrating 20 years since it first opened its doors to the public (see page 14). Much has been achieved in the past two decades to foster a greater understanding and appreciation of the relationships of plants and animals, particularly insects, but we're only getting started. I invite you to explore all the wonderful things to love about the Butterfly House and to toast with us to a new age of prosperity at our Metamorphosis Gala this summer.

We're also commemorating the 25th anniversary of the Whitmire Wildflower Garden at Shaw Nature Reserve (see page 10). This magnificent space has become the region's premier demonstration garden and learning space for native plant horticulture. Thanks to the Nature Reserve staff's work in the wildflower garden and out in the community, today we can happily say there is more awareness of the ecological benefits of native plants—not to mention the beauty they add to any home landscape. This is one of the many ways the Garden continues to play a leading role in protecting plant life at home and around the world (see page 6).

Finally, I'd like to invite you to experience the Garden in a whole new way this summer with Flora Borealis: A Nighttime Multimedia Experience (see page 16). The magic of summer truly comes to life after dark, when you'll travel on a journey across the Garden surrounded by lights, moving images, and sounds. Come experience the Garden like never before!

Dr. Peter Wyse Jackson, *President*

teler Wyse Juston

Isabelle C. Morris

Sue B. Oertli

Julie Peters Sue M. Rapp

what's new?



Mike Smith, the first Volunteer Land Steward, has been volunteering at Shaw Nature Reserve for over a year, learning by doing alongside ecological restoration staff.

Empowering Volunteers To Restore Ecosystems

Shaw Nature Reserve has launched a new program that will greatly increase its land management capabilities. Mike Smith has been named the Nature Reserve's first Volunteer Land Steward. Smith will be taking over stewardship of 16-acres along Brush Creek, just south of the Bascom House. With support from Nature Reserve staff, Smith will lead restoration efforts in his stewardship unit, including the control of invasive species. Staff hope to expand the land stewardship program to other dedicated volunteers in the future, improving capacity to restore and effectively manage more areas across the Reserve.



World Flora Online Receives Support

The Garden has received \$1.3 million from Monsanto Company to support its work on the development of a World Flora Online. The gift extends the company's support for the project

after \$5 million in gifts since 2012. "The Missouri Botanical Garden is proud of our involvement in creating the World Flora Online by 2020," says Garden President Dr. Peter Wyse Jackson. "We've come far in this endeavor, and with Monsanto's support, the Garden and our partners will be able to achieve this goal and benefit biodiversity conservation around the world." The World Flora Online is an international collaborative effort to develop the first-ever comprehensive online resource for all the world's known plant species by 2020. Monsanto's grant is a challenge gift that will need additional generous support of the Garden community.



Educator Returns to Lead Nature Reserve Programs

Jessica Kester joined Shaw Nature Reserve in February

as the new Senior Manager of Education and Interpretation. She has a master's degree in Environmental Management from Duke University, and previously served in the education division at the Garden from 2004 to 2010. Kester says she is looking forward to growing the Nature Reserve's educational offerings by developing new programs, leveraging new technology, and updating on-site interpretation—all to help visitors better connect to nature and understand the importance of our native ecosystems. Kester succeeds Lydia Toth, who retired early this year after 31 years at the Nature Reserve.



Garden Educator To Embark on Expedition

Kat Golden, Sustainability Education Manager

at the Garden's EarthWays Center, was named a 2018 National Geographic Grosvenor Teacher Fellow. The program, through a partnership between Lindblad Expeditions and the National Geographic Society, sends 40 educators on global expeditions for hands-on professional development. Golden will be traveling on the National Geographic Endeavor II to the Galápagos Islands off the coast of Ecuador, in November. This will be an exciting opportunity to discover new ways to learn about the world around us and help encourage stewardship and responsibility for our changing planet.



Three rooms on the east side are now open to the public.

Tower Grove House Rooms Now Open

While the west wing of Henry Shaw's country home, Tower Grove House, was restored to the 1860s décor of Shaw's life, most of the east wing has been closed off since 2005. Phase 1 of a new renovation project is complete and three bedrooms upstairs

on the east side have been reopened for Garden visitors. This side will share the life of Tower Grove House after Shaw, starting with the Garden's first director, Dr. William Trelease, and his family. The space will share stories about life in St. Louis at the turn of the 20th century along with technological and architectural advances of the time. Through a combination of interactive and display areas, visitors will explore the Garden's work in plant conservation and how its living and herbarium collections started. The public is encouraged be a part of the process with questions and feedback as this project develops over the next year. Follow along as the rooms come to life at discoverandshare.org.

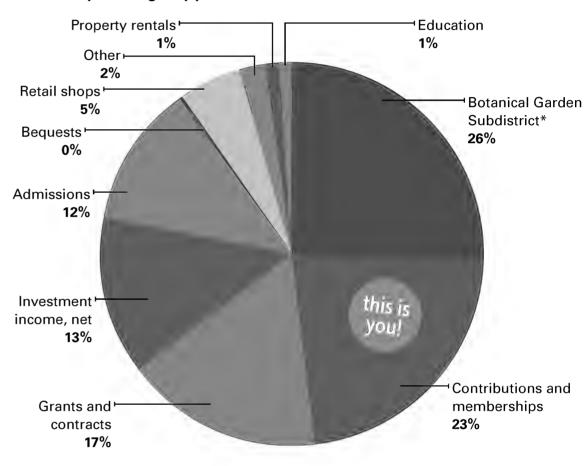
Garden For The World Update

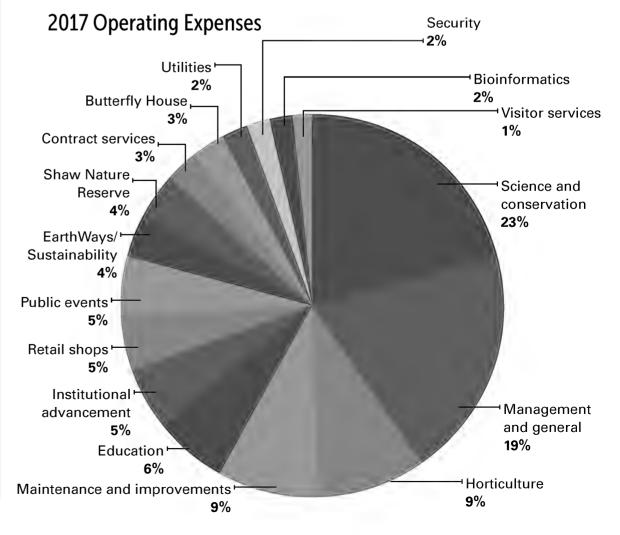
The first phase of the Oertli Family
Hardy Plant Nursery is complete. The
6.5-acre space on Bent Ave. is prepared for
Garden use, with all plumbing and similar
substructures in place. The main greenhouse
structure has been completed, incorporating
a structure donated by Ahners Nursery.
Phase II begins with the installation of the
exterior shade structure and plans for the
nursery headhouse. Next steps include
securing funds for the boiler system for heat
and mist and propagation benches. To learn
more, visit mobot.org/hardyplantnursery.

of the Garden's operating support comes from you THANK YOU!

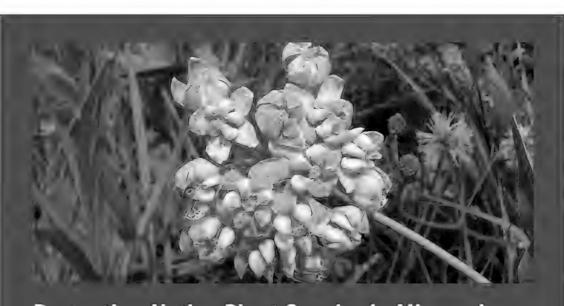
Excerpted from the Garden's 2017 Annual Report, these charts provide an overview of the sources of support and also illustrate how funding is used to advance our mission and strategic goals. Thank you for contributing to our success! To learn more, visit mobot.org/reports.

2017 Operating Support and Revenue





research news



Protecting Native Plant Species in Missouri

Garden researchers Dr. Christy Edwards and Dr. Matthew Albrecht of the Garden's Center for Conservation and Sustainable Development received funding to study the effect of genetic diversity on the reproductive output of Mead's milkweed (*Asclepias meadii*). Once abundant across the Midwest, this threatened Missouri native is declining in part because of low reproductive success. Many of the remaining populations are thought to contain genetically identical plants, and this study will test whether that is a factor. The project is in collaboration with the Missouri Department of Conservation, the U.S. Fish and Wildlife Service, Missouri Department of Natural Resources, The Nature Conservancy, and others.

Made possible with a grant from the Missouri Department of Conservation.

Supporting Plant Conservation in the Americas

Garden President Dr. Peter Wyse Jackson and other
Garden staff traveled to Cuba this April for
the 2018 Botanical Bridges Congress. It
was held at the National Botanic Garden
in Havana, which is celebrating its 50th
anniversary. The first Botanical Bridges
Congress in 2016 led to the renewal of The
Caribbean and Central American Botanic
Garden Network, which had been on a long hiatus.
The network includes 20 countries and 17 dependent states
that collectively house 17% of the world's flora. Garden
staff helped organize this year's congress and presented on
topics ranging from conservation strategy and restoration
to living collections development and ethnobotany.



New Museum Curator Joins the Garden

Nezka Pfeifer, Museum Curator of the Stephen and Peter Sachs Museum, joined the Garden in February.

After undergoing an extensive renovation, the historical building opened to the public this spring for the first time since 1982. Pfeifer, who attended the prestigious Cooperstown Graduate Program in Museum Studies in New York, has had extensive experience developing interdisciplinary exhibitions and managing collections—from natural science specimens to superheroes and comics. "It's so unusual to have the opportunity to bring museum and exhibitions experience to an organization that is usually known for live plants and scientific research collections," she says. "I hope to engage with the staff and public in new ways through the Museum, offering different perspectives on the importance of plants and botany in our society and culture."



Recent Awards and Recognitions for Garden Staff

Sheila Voss, Vice President of Education 2018 Sustainability Award | Center for Spirituality & Sustainability | Southern Illinois University Edwardsville

Dr. Quinn Long, Director of Shaw Nature Reserve 40 Under 40 | St. Louis Business Journals

Dr. Alan Graham, Research Associate
José Cuatrecasas Medal for Excellence in Tropical
Botany | National Museum of Natural History |
Smithsonian Institution

Dr. Peter Hoch, Director of Graduate Studies Outstanding St. Louis Scientists Awards-Trustees Award | Academy of Science-St. Louis Q.

I keep hearing the word "forb" when talking to others about seeding, plant selection, or just gardening in general. They're not talking about a specific plant species, so I'm confused. What exactly is a forb?

A forb is another term for a flowering plant. They go by many different names and not all of them flower, but forbs' main characteristic is that they are not grasses or woody plants. Some people may think of them as weeds, but native forbs can have many benefits, including attracting pollinators such as bees and butterflies. Plus they're also a good food source and habitat for larvae and other insects.



Garden horticulturists visited Kyrgyzstan this spring to find, identify, map, and collect endangered crop wild relatives, including *Amygdalus bucharica*, or wild almond.

Work to Save Wild Crop Relatives in Kyrgyzstan Continues

Garden horticulturists are on a mission to save the ancestors of our modern cultivated apple. The walnut-fruit forests of the Tien Shan region of Kyrgyzstan are home to a of endangered crop wild relatives—including apple, walnut, almond, and pear. Garden staff traveled there this spring to find, identify, map, collect, and eventually propagate these internationally important species under threat of extinction from habitat loss and overharvesting. Later this year, the team will collect and propagate these species in partnership with Gareev Botanical Garden in Kyrgyzstan. Our horticulturists will also provide equipment, training, and other resources to the local staff to help bolster conservation efforts.

Work made possible by the support of the Franklinia Foundation.



Wild About
Natives
Scott Woodbury
Manager of
Horticulture

Scott Woodbury joined Shaw
Nature Reserve in 1991. Before that,
he had worked at Tudor Place in
Washington D.C. for two years, right
after graduating from the University
of Wisconsin. That means his 27-year
career at the Nature Reserve is only his
second job out of college. He was hired
to create the Whitmire Wildflower
Garden (see page 10) and promote
native landscaping in the community.

His love for plants started in middle school on a job raking leaves in a garden. As the bleeding hearts emerged from the ground in spring, he noticed how beautiful they were. "And it's always struck me," he says. "I've been gardening ever since."

Today, he manages 5 staff and 46 volunteers at the Nature Reserve. His team's main focus is native plants that they have found in the wild, collected seed, grown in their greenhouse, and planted out in the garden. They look at each species for potential landscape use, but if it's something not suitable for a home garden, it may still help manage stormwater along creeks or have other restoration purposes. Woodbury and his team collaborate closely with the education and ecological restoration teams at the Nature Reserve, teaching Native Plant School classes, collecting seeds for restoration projects, conducting prairie burns, removing invasive bush honeysuckle, and more.

what can you do?

Enjoy Some Summer Picnic Fun

The warm days of summer are the perfect excuse to pack up your favorite picnic food and enjoy the outdoors. Here are some ideas:



Member Family Picnic at the Garden

Join us June 5 for this free, member-only evening with fun for the whole family. See page 18.



Whitaker Music Festival at the Garden

Our popular free Wednesday evening concerts are back! For more details and the full lineup, see page 20 or visit mobot.org/ whitaker. *New!* American Sign Language (ASL) interpreting offered at all shows through a partnership with Fusion Interpreting Services. Whitaker Music Festival made possible by Whitaker Foundation.



Summer Buggin' Nights at the Butterfly House

Bring a picnic to Faust Park or grab a bite from on-site vendors on Friday nights from 4 to 7 p.m. in July and August. Hunt for bugs and fireflies, see live animals, and more! Included with admission; free for members. More at butterflyhouse.org.



WildFlower Concert Series at Shaw Nature Reserve

In celebration of the 25th anniversary of the Whitmire Wildflower Garden (see page 10), Shaw Nature Reserve will hold a series of Saturday concerts in June from 4–8 p.m. on the front lawn of Bascom House, surrounded by the Whitmire Wildflower Garden in full bloom.

Visitors are encouraged to bring chairs and blankets. Food and alcohol* will be available for purchase from local vendors, including Brown Jerry's, Six Mile Bridge, and Pinckney Bend Distillery. Included with Nature Reserve admission; free for members and children 12 years old and younger.

Concert Lineup:

June 9 – Downstream

June 16 – The Gaslight Squares

June 23 – The Dust Covers

June 30 – Flea Bitten Dawgs

*No outside alcohol is permitted.



Keep Your Picnic Green

Picnic food and beverages can produce an unwelcome byproduct waste. Here are some simple ways to ensure that your picnic is waste-free:

- Pack sustainably using a picnic basket or a reusable bag as well as reusable water bottles, containers, and utensils.
- Compost any leftover food waste.
- Try local brands of beer, wine, or sodas and locally raised produce and meat.
- Try herbal-based mosquito repellents.
- Recycle containers in designated receptacles.

For more green ideas, check out the Green Living Festival on June 2 (see page 20) or mobot.org/sustainability.



Make Your Event Greener

Check out the Green Event Guide from the Garden's EarthWays Center at greeneventguide.net. This comprehensive tool allows you to set green goals for reducing waste in all aspects of your event. A free planning tool also allows you to customize your green goals and measure your success. This project was developed by the Garden in partnership with the U.S. EPA Region 7.

Visit the New Aroid Exhibit

Don't miss the all-new
Aroid Exhibit June 4 through
September 15 in the Linnean
House. The Garden's aroid
collection is considered
one of the largest and most
comprehensive in the world. For
more information, visit mobot.org/events.

photos by Bethany Ottens and robynmac



Get Exclusive Evening Access to the Garden in June

Members are invited to enjoy exclusive evening access to the Garden on June 5, 12, 19, and 26 from 5 to 8 p.m. The fun kicks off June 5 with the Member Family Picnic (see page 18) and continues each week with themed tours led by Garden docents, free play and activities in the Children's Garden, and visits and activities from community partners. Sassafras café is not open during Member Tuesday Nights, and no other food or drink is available (unless otherwise noted). Reservations are not required; simply bring your membership card for entry. Regular admission fees apply for nonmember guests. For more information, visit mobot.org/ membertuesdays or call (314) 577–5118. Please note: Due to Flora Borealis, there are no Member Tuesday Nights in July and August.

alzheimer's Take A Specialty Tour For People With association Memory Loss and Their Care Partners

The Garden has partnered with the Alzheimer's Association—Greater Missouri Chapter for meet-up events for individuals with mild memory loss and their family members, friends, and other supporters. A walking tour will take place on June 9 and tram tours on May 29 and June 19, all of them from 10:30 to 11:30 a.m. They are free, but space is limited. Registration required: mobot.org/classes and click on "Guided Walks and Tours" or call (314) 577–9506.

Save the Date: Native Plant Fine Gardening Symposium

Interested in using Missouri native plants in your home garden? See page 10 for a special feature on the Whitmire Wildflower Garden. Plus, don't miss the Native Plant Fine Gardening Symposium at Shaw Nature Reserve October 19–20. This special event will offer lectures and workshops detailing the benefits of native plant use for home gardening. More at shawnature.org/events.

Missouri Botanical Garden Bulletin



Wish A Happy Birthday to Henry Shaw!

We are celebrating our founder's 218th birthday! In honor of this momentous occasion, please

consider making a special gift to the Garden on July 24 (or before!). Henry Shaw would be proud to know the Garden has so many people who care about it. Donors like you are what make our mission possible. Make a gift at mobot.org/happybirthdayhenry.

Plus, don't forget that on July 24, all visitors enjoy free admission to the Garden, Butterfly House, and Shaw Nature Reserve in honor of Shaw's 218th birthday. For activities and more details, visit mobot.org/events.



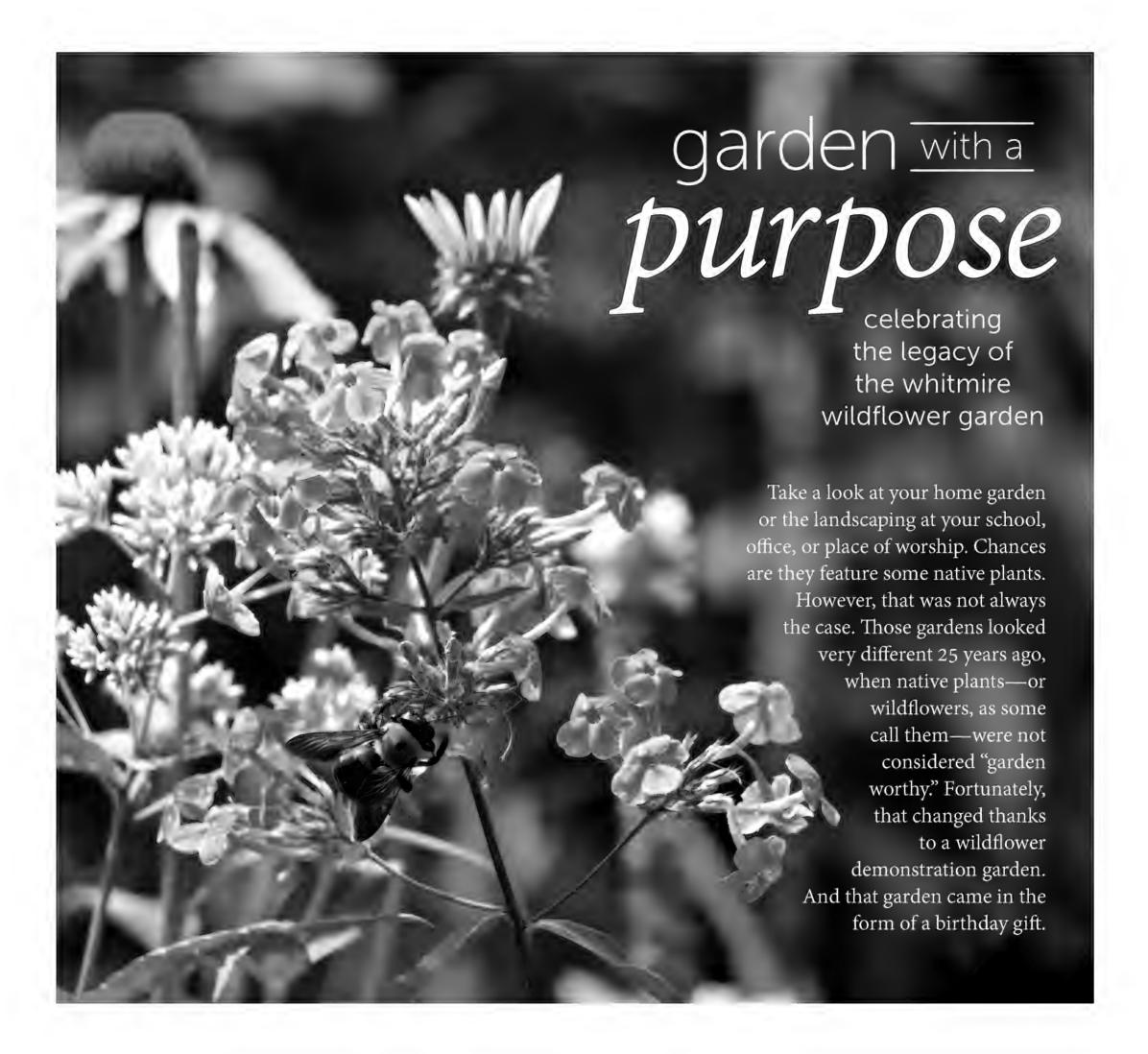
Enjoy Our Educator Appreciation Days

At the Garden, we thank educators for their daily,

unwavering commitment to creating curious, lifelong learners. During the weeks of June 24–30 and August 5–11, educators receive 20% off memberships and three special nights for teachers and their families:

- Educator Appreciation Night at the Garden | June 26 | 5-8 p.m.
- Educator Appreciation Night at Shaw Nature Reserve | June 30 | 4–8 p.m.
- Educator Appreciation Night at the Butterfly House | August 8 | 5–8 p.m.

The first 100 educators at each event will receive a free Citizen Science for Schools kit developed by the Garden and the BiodiverseCity St. Louis network. Events are free, but registration is required: mobot.org/events.



The Gift

The Whitmire Wildflower Garden was created to celebrate a birthday. In 1987, local businessman Blanton Whitmire wanted to surprise his wife, Peg, for her 70th birthday. Frequent visitors to Shaw Nature Reserve, the Whitmires always loved nature. On her birthday, Peg arrived at the Nature Reserve for her surprise birthday gift. She thought she was going to receive a puppy; instead, she received a wildflower garden.

Actually, it was the promise of a wildflower garden. In 1987, that area was a woodland overrun with invasive bush honeysuckle. Turning the Whitmire's vision into reality would take years. Horticulturist Scott Woodbury was hired in 1991 to help build the garden, and in 1993, the garden was officially dedicated. "It was a great opportunity to be on the forefront of something that's new and controversial in some places," he says.





(above) Blanton and Peg Whitmire with horticulturist Scott Woodbury in 2006. Woodbury joined Shaw Nature Reserve in 1991 to help bring their vision to life with the Whitmire Wildflower Garden.

(left) The Whitmire Wildflower Garden, officially dedicated in 1993, today features 600+ species of Missouri native plants. Nature Reserve horticulturists focus on each species' potential landscape use before making it part of the core display gardens.

Controversial because at that time—and to some degree still today—there weren't many gardens around the country dedicated to native landscaping and native plants. To many, the word "wildflowers" equals "weeds." People think native plants will run rampant in their gardens and overtake their beautifully manicured landscapes. Tearing down the misconception that native plants don't have a place in gardening is exactly what the Whitmire Wildflower Garden was meant to do from the beginning. "I think we've really taken native plant gardening to a level that can fit into any botanical garden or neighborhood, and really be seamless as just another garden," Woodbury says.

More Than Meets the Eye

To understand the impact of the Whitmire Wildflower Garden over the past 25 years, it's important to first know what native plants are and why they're important. A native plant can be defined in different ways. At the Nature Reserve, Woodbury's team defines it as a plant that was growing in the area before European settlement. Others expand the definition to include cultivars or nativars, which are selections of native species bred for specific characteristics. The Whitmire Wildflower Garden has a few cultivars of known local origin, but most of the 600+ species featured were collected in the wild around the region.

Native plants offer a diverse palette of colors and textures that add beauty to any garden while offering benefits such as erosion control and stormwater management. For thousands of years, native species evolved and adapted to thrive in the local climate and with the different soil types, moisture levels, pests, etc. Native plants also have a unique relationship with native wildlife, which contributes to the overall biodiversity and health of the ecosystem. "People are thrilled about bringing native plants into their yards because they're not just to look at; they're not just beautiful flowers," Woodbury says. "We now have an opportunity to have plants in our yards with a purpose."

Summer 2018 Missouri Botanical Garden *Bulletin* 11

native plants for all

If you're thinking about incorporating native plants into your landscape, check out these resources and be inspired:

garden newbies

visit the whitmire wildflower garden; the possibilities are endless!

attend the two annual native plant sales at shaw nature reserve (may and september) for the best selection and expert advice

seasoned gardeners

check out cindy gilberg's gardening is a verb, available at mbgpress.org



enroll in shaw nature reserve's native plant school at shawnature.org/nps

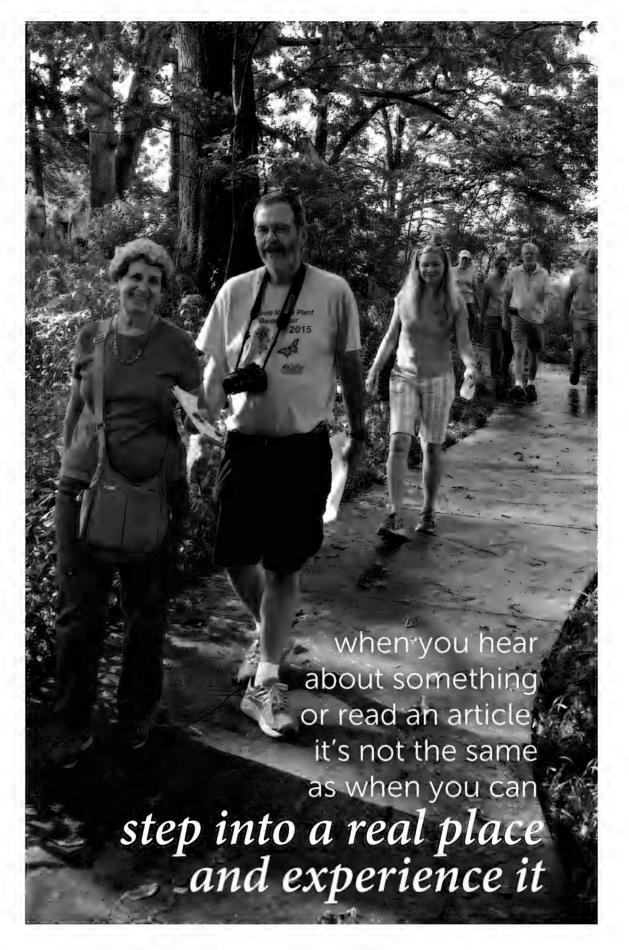
aspiring horticulturists and ecologists

download your copy of the native landscaping manual at shawnature.org

inquire about native plant curriculum at your local college or university, whether it's individual classes or full programs

professional

register for the shaw series for stormwater and landscape professionals at shawnature.org



Your Garden

Home gardeners and professional landscapers alike are turning to native plants to promote plant and wildlife conservation. The progress is largely thanks to that gift that Blanton gave to Peg and, in turn, they both gave to the region. "The Whitmire Wildflower Garden is the most impressive horticultural display of native plants in the entire Midwest," says Dr. Quinn Long, Director of Shaw Nature Reserve.

Today, beautiful native landscapes can be found across St. Louis. But those gardens probably would not exist if those property managers or home gardeners hadn't taken a step forward. They may not have taken that important first step if they didn't have anything else to look at, so the

Whitmire Wildflower Garden was, for some people, that stepping stone. "When you hear about something or read an article, it's not the same as when you can step into a real place and experience it," Woodbury says.

If you're thinking about incorporating native plants into your landscape, take a stroll in the Whitmire Wildflower Garden and get inspired. Woodbury and his team have already done much of the research for you. They've looked at each species' potential landscape use and determined that if it's something that's beautiful, small, and well-behaved, it becomes a core part of what is demonstrated in the garden. If it's something a bit more aggressive, it might still also be interesting to use in prairies and to manage stormwater. *The right plant in the right place*.





(this page, counterclockwise from top) Indian pink (*Spigelia marylandica*), Purple coneflower (*Echinacea purpurea*), and Rose mallow (*Hibiscus lasiocarpos*)—all Missouri natives—are just a few of the options gardeners have when incorporating native plants into their landscape.



(opposite page) Visitors participate in educational opportunities that use the Whitmire Wildflower Garden as an outdoor classroom, drawing inspiration from the display gardens.

celebrate 25 years

to commemorate the 25th anniversary of the whitmire wildflower garden, shaw nature reserve will hold a series of concerts in june

wildflower concert series saturdays, june 9, 16, 23, and 30 | 4-8 p.m. included with admission | free for members see page 8 for more or visit shawnature.org/events

Other resources on native landscaping include St. Louis Community College, which incorporates native plants into their horticulture and landscaping curriculum (Woodbury sits on the college's Advisory Committee). The Nature Reserve's own Native Plant School offers year-round workshops for home gardeners using the Whitmire Wildflower Garden as an outdoor classroom. Finally, shawnature.org offers a wealth of information on native plants, from plant lists to the Native Landscaping Manual. "We're not about telling people what they should or shouldn't use in their gardens necessarily or that non-native plants are bad by any means," Woodbury says. "We are trying to encourage people to bring a few native plants into their landscape, try them out, and see if they don't perform differently than the non-native plants that they may already have."

Looking Ahead

This summer, be sure to look for new features. The Council Ring, a gift of Lawrence and Joan Hummel, is a gathering and education space in the heart of the garden. Future plans include a Threatened Plant Garden and a Native Edibles Garden. The displays will continue to evolve and demonstrate that a garden can be a beautiful place to enjoy both the plants themselves and the wildlife they benefit. "We want to give people hope," Woodbury says. "We want to give people the sense that they can create a garden like ours at home or in their community—one that is meaningful and that will eventually help other people discover the benefits of native plants."



LOOKING BACK a lot can happen in 20 years



965,000 butterflies took flight in the conservatory



15,600 lbs.
bananas to fill fruit trays for our butterflies



kegs of beer consumed in our "butterfly nectar"



208,000 cockroach babies born in our lab



250,000 plants grew on grounds



3,039,469 people of all ages visited



362,861 member visits



1,200 couples that said "I Do" here

WHAT'S NOT TO LOVE reasons to visit the butterfly house



Be inspired to plant your butterfly garden.



Get free admission to our three sites with your membership.



Witness the butterfly's life cycle.



Say "I Do" in a setting like no other.



Adopt a butterfly and help support our scientific work.

Follow us on social media as we count down to the 20th anniversary of the Butterfly House with a weekly look at 20 of our favorite things about this unique St. Louis-area destination.



June 23, 2018 | 7–10 p.m. Butterfly House Join us for a night of opulent celebration at our Roaring Twenties-themed gala. Proceeds support the expansion of the Entomology Lab. \$125 members; \$150 nonmembers. Tickets and information available at butterflyhouse.org/gala.



a nighttime multimedia experience

BEGINS JUNE 29

MEMBER PREVIEW JUNE 28



Scan this code to watch a short preview

Join us for a luminous interactive journey through breathtaking cinematic displays across the Garden's iconic spaces.

You'll never see the Garden the same way again!





Depending on your membership level, you will receive discounted or free tickets to Flora Borealis. All tickets, except for free Patron Vouchers for Contributor members and above, are timed and dated.

Membership Level	Your Ticket Benefit	
Individual–Friends and Family	Save \$5 per ticket	
Festival	6 free tickets	
Contributor and above	Patron Vouchers	

The Magic Begins After Dark

Beginning at dusk each night, you'll embark on a 1-mile journey through iconic Garden locations transformed through a combination of lights, moving images, and sounds that bring the Garden to life like never before.

Stroll Garden grounds until sunset, explore our Biergarten, and enjoy family-friendly activities before your Flora Borealis experience begins.



Biergarten | Open nightly at 7 p.m. Start your evening with live entertainment (select nights), creative cocktails, and snacks.

Behind the Design: Flora Borealis June 26 | 11 a.m.-noon

Join us for an exciting behind-the-design presentation about Flora Borealis. Learn how the creators applied their experience from past projects, see sketches from versions of the exhibit, and hear the story of how it came to fruition fulfilling the mission of the Garden. Designed for adults only. \$5 members; \$6 nonmembers. Pre-register at mobot.org/classes.

photos by Wesley Schaefer and aha_x

More information at mobot.org/flora

photos by Sundos Schneider, Kat Niehaus, and Karen Fletcher

just for members











Membership Benefits

Members enjoy extra benefits! Stop by the Garden Gate Shop on the first Friday of each month for double card punches or 20% off your purchase. On the last Tuesday of the month, take 10% off your purchases in Sassafras café.

Member Family Picnic June 5 | 5–8 p.m.

Kick off June Member Tuesday Nights with extra fun at the annual Member Family Picnic! Pack a waste-free picnic, and bring your blankets and chairs. This special evening will offer fun for the whole family with live music by Dizzy Atmosphere, a chance to explore the renovated Sachs Museum, face painting, photo opportunities, and crafts. Visit with our friends from the Butterfly House and Shaw Nature Reserve, and play in the Children's Garden after hours! Free popcorn and lemonade will be served, with picnic fare and barbeque available for purchase. Reservations required.

Member Tuesday Nights

Tuesdays in June* | 5–8 p.m.

Members enjoy exclusive evening access to the Garden every Tuesday in June. Connect with fellow members, play in the Children's Garden, enjoy a twilight stroll, take a themed tour with Garden docents, and discover new surprises each week!

*Due to Flora Borealis, there will be no Member Tuesday Nights in July and August.





Information and registration at (314) 577-5118 or mobot.org/memberevents unless otherwise noted.







Member Speaker Series: Cocktail Gardens—from Porch to Party!

June 19 | 6–7 p.m. | Shoenberg Theater

Enjoy a special evening installment of the Member Speaker Series during our Member Tuesdays. Join expert gardeners from Maypop Coffee & Garden Shop to learn how to create a container garden designed with drinks in mind. Then watch the team from STL Barkeep mix, muddle, and blend garden-fresh ingredients into signature summer cocktails. After the program, enjoy drinks from a cash bar on Spoehrer Plaza.

Member Speaker
Series: Perennials
July 17 | 11 a.m.-noon |
Shoenberg Theater
Become a pro at
perennials! Learn what's
new, what's rediscovered,
and what works in lower
Midwest landscapes from
professional horticulturist
William T. Ruppert.
Reservations required.

Member Speaker
Series: Wonderful
Water Lilies
August 21 | 11 a.m.-noon |
Shoenberg Theater
Join Nursery Senior
Manager Derek Lyle for a
behind-the-scenes look at
the Garden's water lilies.
Learn about the history
of the collection, what
goes into their care, and
recent improvements to
the pools. Reservations
required.

19

special events



Illinois Appreciation Week June 10–16 | 9 a.m.–5 p.m.

Illinois residents receive \$6 Garden admission; a 10% discount in the shops; and a 20% discount off new or renewal memberships purchased on-site this week (with a valid Illinois ID).



METAMORPHOSIS

celebrating 20 years Gala

June 23 | 7-10 p.m. | Butterfly House

To celebrate its 20th anniversary, the Butterfly House invites you to embrace all the glitz and glamour of the 1920s with roaming performers, antique cars, a wine pull, a silent auction, and more. \$125 members; \$150 nonmembers. Proceeds support a new entomology lab. Tickets and information at butterflyhouse.org/gala.

Butterfly House Birthday Bash

July 14 | 10 a.m. – 3 p.m. | Butterfly House

Did you know we collect over 1,500 pounds of fruit for our butterflies throughout the year? For our 20th birthday, you can donate to our "Pennies for Produce" birthday drive! You can also donate gift cards from local grocery stores. We'll have games, crafts, music, and more to help us celebrate this Birthday Bash. Included with admission.

ZMD Member Appreciation Week June 17–23

The five cultural institutions of the St. Louis Zoo Museum District (ZMD) will offer 20% off membership. Members of any of the district's institutions—the Missouri Botanical Garden, Missouri History Museum, Saint Louis Art Museum, Saint Louis Science Center and Saint Louis Zoo—need only show a membership card to enjoy the discount on another membership.



Run, Walk, Stretch!

Presented by Graybar August 19 | 7–9 a.m.

Join the Garden and YogaBuzz for a healthy morning of running, walking, and yoga. \$30 members and virtual runners; \$40 nonmembers. For tickets and more information, visit mobot.org/run. Advance registration required.



shop & dine

From gardening tools and unique toys to vintage items and local products, the Garden shops have just what you're looking for.

Look for these icons to know where each event or sale is taking place.



Garden Gate Shop

4344 Shaw Blvd. St. Louis, MO 63110 Monday–Sunday 9 a.m. to 5:30 p.m. (314) 577-5137



Butterfly House Gift Shop

15193 Olive Blvd. Chesterfield, MO 63017 Tuesday–Sunday 10 a.m. to 4 p.m. (314) 577-9477



Little Shop Around the Corner

4474 Castleman Ave. St. Louis, MO 63110 Tuesday—Saturday 10 a.m. to 4 p.m. Sunday, noon to 4 p.m. (314) 577-0891

Check I

Light Up The Night During Flora Borealis

Join the magic of Flora
Borealis this summer with our
custom Flora Borealis shirts,
drinkware, and light-up toys
available exclusively at the
Garden Gate Shop. On Flora
Borealis nights, the shop will
be open until 11:30 p.m. See
shop for more details.

First Fridays Are Now Member Double Days

First Friday of each month |
All Garden members receive 20% off purchases or double card punches on the first Friday of each month.

Café Flora

April-October | 10 a.m.-2 p.m. | Sundays | Spink Pavilion

Sit at the iconic Spink Pavilion to enjoy a delicious brunch, featuring bottomless mimosas for \$18. No reservations necessary. Call (314) 961-7588 ext. 265 for more information.

Around the World Wine Dinners

Third Thursday of the month | March-October | 6:30 p.m. | Spink Pavilion
Travel to wine-producing regions
through a five-course dinner paired
with a different wine from the same
region. \$70 (plus 18% service charge
and tax). Advance reservations
required: (314) 577-0200.

Staff and Volunteer Sale

June 6-8 | 😻 🔊 🧸

As a "thank you" for making the Garden a world-class institution, all Garden staff and volunteers receive an extra 10% off their purchases.

Banner Road Tasting

June 23 | 11 a.m.−4 p.m. | 😻

Enjoy a tasting of Banner Road Baking Company's delicious granola.

Little Shop Smalls Sale

June 29–July 1 | 🗸

Shop our "small" items-lamps, glass, crystal, jewelry, figurines, dishes-with increasing discounts each day (no additional discounts apply). See shop for details.

Green Earth Art Trunk Show

July 14–15 | 11 a.m.−4 p.m. | 😻

Check out the concrete castings for your home and garden that celebrate nature and beauty.

Little Shop Art & Chair Sale July 31–August 5 | A

Enjoy 50% off all art and chair items in the shop (no additional discounts apply). See shop for details.

Plan Your Special Events

Plan a unique corporate party at the Garden this summer with Flora Borealis or this holiday season with Garden Glow. Private events at the Garden are the ideal way to thank your customers, treat your staff, and network with colleagues. For more information and to book your event, call (314) 961–7588, ext. 290.

» staff pick



Reusable Eco-Bag

This beautiful tote is made of 100% recycled plastic bottles and is machine washable—perfect for all your grocery shopping and picnic outings. Price: \$4. Available at the Garden Gate Shop and Butterfly House Gift Shop.

commemorative gifts

January-March 2018. A commemorative gift is a wonderful way to honor family and friends. Gifts of \$50 or more are listed in the *Bulletin*. For more information about giving opportunities at the Missouri Botanical Garden, please call (314) 577-5118 or make a commemorative gift at mobot.org/tributes.

In Honor of

John Behrer

Lawrence and Nancy Gelb

Bruce S. Buckland

Mrs. Gwen L. Rogers

Sarah Diester

Kristin Repole

Ellen and Henry Dubinsky Susan Terris

Sondra E. Ellis Geoff and Wendy Ellis

Jennifer Hartley

Missouri Botanical Garden **Docents**

Mrs. Ruth Hellstern

Edward and Viola J. Striker

William and Margaret Ann

Jeanne T. Keirle

Lou Myers

Keyes

Eddie Roth and Jeanne Philips-Roth

Cheryl Mill

Bob Herleth

Mrs. Laurie C. Milnor

Dr. and Mrs. Edward Schwarz

Ms. Christie Murphy

Mrs Julie Schnuck Molly Shelton

Katie O'Sullivan

Missouri Botanical Garden **Docents**

Haley O'Toole

Missouri Botanical Garden **Docents**

Rich and Debbie Rubenstein

Ellen and Henry Dubinsky

Emmet Carter (Tim) Smith

Carolyn and Ernie Clarke

Babs Wagner

Missouri Botanical Garden Docents

Mary Helen Winsby

Carolyn Winsby

Dr. Robert Young

Dr. James and Jane Rohrbaugh

In Memory of

Joann Arpiani

Tom and Linda Lucatorto

Liz Baltz

Randy Baltz

Peggy Bensinger

Thermo Kool Michael and Susan Vasquez

Kate Birdsong

Ms. Barbara A. Deiuliis The McGuire family David and Marsha Vogel

Carl F. Blatt, Sr.

Carolyn Forsen Sandy Hunsaker Helen and Walt May Mercy Gastroenterology Mrs. Christine Puff

Harry P. Brightman

Mr. and Mrs. Lucien R. Fouke, Jr. Barbara B. Morriss

Donna Brzenk

Greg and Roann Powell

William H. T. "Bucky" Bush

Mr. Clarence C. Barksdale Susan Bentele Mr. and Mrs. David C. Farrell Mr. and Mrs. David M. Hollo Mr. and Mrs. Charles E. Kopman John and Constance

McPheeters

Mrs. Bonnie J. Morse Mr. and Mrs. Andrew C. Taylor

Punch Collins

Ann McCandless Jane Nelson & Susan Jones

Mrs. Dolores M. Corley

Tim and Debbie Callihan Mr. and Mrs. Nicholas J. Jacobs The Maritz Green Team **David Nemerov and** Diane Weber

Elaine Goble Dandridge

Anonymous

Nancy W. Demaree

Nestle Purina PetCare Company

Artie Detring

The Evening Primrose Garden Club Parkland Master Gardeners

Phyllis DeYong

Douglas W. King Mrs. Karen S. Haller HydroGeoLogic, Inc. Joyce and Duane Patterson St. Louis FUSRAP Team

Barbara and Vernon Vavrina Marc and Suzanne Watts

John W. Kourik

Estate of John W. Kourik

Vida S. Sax

Family of Vida S. Sax

Neil S. Ewing

Christine Ewing and Houston family

Marilyn Fett

B & D Machine Works, Inc. Myron Fett Lauren Peters Mrs. Carol A. Prunty Sharon and Virgil Runge Anita and Mark Schneidewind George and Carolyn Vollert

Muriel Gilberg

Jan Simons and Charlie Raiser Maxine Stone

Joan Goodman

Susan Ansehl Mary Hammer Jill and Bill Mueller

Laura Wilson Gruett

Daniel and Carol Gravens

Travis J. Hanrahan

Joseph and Patsy Hanrahan

Theodore M. Herbert Hans and Judy Neas

Deanne Holzberlein

Matthew Liles

Mary Horwitz

Ann S. Lux

Helen Hottle Kaemmerlen

Bruce and Rose Marie

Kaemmerlen

Mrs. Holly Hutchings-Zalewski

Mr. and Mrs. John K. Stringham

Rebecca Lowe Ingram

Mr. Paul E. Edler

Mrs. Agnes Graveman Bob Herleth Dr. William G. Juergens James and Barbara

Fernandez Ellen Hoffman Hall Dr. and Mrs. George E.

Mendelsohn Joan Miller

Dr. and Mrs. Ernest T. Rouse III Mr. and Mrs. Ned Stanley, Sr. Mrs. Roberta Rassiuer

Joanne Francis Keefe

Ms. Billie Frey

Williams

Barbara Knaus

David and Constance Bennett Monique Dattilo Linda and Richard Kohm

Kerry Kopp and Thomas W. Kopp, Sr.

Thomas Klipp

Henry and Blanche Kourik Estate of John W. Kourik

Mary and Oliver Langenberg Charles Allen and Lisa Schlesinger

Betty Roth Lee Margaret Martin

Mary Margaret Leggitt Ms. Joan Schlueter

David Lloyd

Tom and Cindy Woolsey

Dr. Bernard S. Loitman Dr. George and Stephanie Mendelsohn Mrs. Miriam Storch

Mary Anne Lucas

Jen and Ryan Blum Joan Diester Sarah Diester Gary Lucas Tim and Missy Lucas Kathy and Richard Repole Kristin Repole Bill and Maureen Porter

Ryan M. Mattes

St. Louis Pet Clinic

Mrs. Katie McGuigan

The St. Louis Herb Society Roberta Middelkamp

Mr. and Mrs. Robert A. Luckey

Donald R. Millar Dr. Kenneth R. Millar Kevin Millar

Catherine Molini

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Irene Randolph Morrill

Lisa and Tom Acker Chris and Nancy Allen Dr. Doxey R. Sheldon Campbell and Richard Campbell Carolyn and Ernie Clarke Kathy and Frank Curotto Mrs. Sally Duffield Mr. and Mrs. Lucien R. Fouke, Jr. Mr. and Mrs. David M. Hollo Mr. and Mrs. James S. McDonnell III Charles and Jane Rallo Mr. and Mrs. John D. Schaperkotter

Judy Smith Schoedel

Sedgwick

Dr. and Mrs. William G.

Mary G. Semple

Andrew G. Smith

Mrs. Lydia Mower

Mrs. Linda Bearman The Hager Family Chris and Vicki Mower

Linda "Kelly" Mueller

Mr. and Mrs. J. Joe Adorjan Sharon Brady Sue and Charlie Dressel Susan Gorzynski and Linda Susman Booth Mary R. Loire Ms. Genie Price Wayne and Mary Walker

Mr. Robert Nellums

Mr. Robert N. Bannon Dr. Tom and Jo Brock Erika Fellinger Mrs. Nancy Herlin Kent and Karla Mason Gib, Marlene, Mike, and Mark Morton Linda Mahan Tom and Sharon Pasquini and family Mr. Robert Schultz Harry S. Scott

Mrs. Catherine Woodruff

Susan and Mike Zuspan

Petrychka

Graham Wildsmith

MaryAn Noe Allen and Nancy Coalson Geneva J. Guthrie Ms. Jacqueline Hayes

Margret Nussbaum

Dr. Friederike Seligman

Robert O'Brien

Marvann and Scott Hale **Lesley Oddy**

Mary and Doug DeLong

Betty Jane Ozmat Sandra Krywopusk

Kathleen Parmeter

Larry and Aileen Parmeter Mr. Lot Silberstein

Dr. Prabha Partap

Argentem Creek Partners, LP Vatche and Maria Ayvazian Mr. John Dull Kenneth and Imogene Geib

Gerald "Jerry" Phelan Joe, Julie, and Hanna Cassin Helen Davis The Diechmann family Catherine and Dennis Gates Ms. Susan Greenquist Ms. Anne Hetlage Ann Mandelstamm Kitty and Harold Phelan

Ms. Rosemary Phelan Pat Rich

Dr. Shirley Sahrmann The Smith Children Phyllis F. Walsh

Feroza Razzaq

Richard Blath, M.D.

Stephen Wesley Rich

Amy Carmody Adam Hart John and Nancy Herrin Kevin Rich Mrs. Sharon Rich Steve Rich

Mrs. Rose Marie Roesler Debbie and Mike McEnery

Gladys Schmidt Marlena Barmann

Lucas Graham Tom and Audrey Gooch

Anonymous

Lois Schoech

Selma Schultz **Anonymous** The McCormick family Marilyn Morcom

David C. Sealey Patricia Kamler

Elinor Seele Barbara Enneking

Michael F. Shanahan, Sr. Ms. Catherine Leschen

Mrs. Evelyn D. Shaver Mr. and Mrs. Edward W. Martin

Marvin Sher

Missouri Botanical Garden Docents

Joan Eckhoff Sherman Marti Reichman

Devorah Silverberg Dean Kevin Barnes and

Saint Louis University School of Medicine Betty Bayer, Liz Florek,

Stella Pine, Sarah Schrand

& Katharine Wager Dr. and Mrs. Raymond and

Susan Bourey Marla Bernbaum and

Patrick Reilly Karen Cartwright Dr. Sandeep Dhindsa

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January–March 2018. For more information, call (314) 577-5118 or visit mobot.org/donate.

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Nick Tompras

Nick and Jennifer Orgel Tompras

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January–March 2018. Call (314) 577-5118 or visit butterflyhouse.org/donate to learn more.

Pavers

Cathy Durand

The Retired Gals Group

Paisley Suzanne Ervin Ms. Barbara Rodgers

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Clarence and JoeAnn House Clarence House, Karen and Kristi Harshberger

Rebecca Lowe IngramThe Butterfly House

Eugene Vincent "Vince" Kramolowsky

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The Vagabond Drifter Linda Vogel



In Memoriam: Buck Bush

The Garden is saddened by the passing of our longtime friend and supporter, William "Buck" H. T. Bush. Buck was a Garden member for more than 40 years. He joined the Board of Trustees in 1982 and served as chairman from 1996 to 1997. His philanthropy extended beyond the Garden to worthy

organizations across St. Louis.

Buck and his wife Patty were deeply involved with the success and growth of the Garden. They supported capital campaign initiatives, attended fundraising events, traveled to see international conservation programs, and honored loved ones with commemorative bricks. For many years, Buck served as the chair of the Peter H. Raven Society, leading by example and encouraging donors to provide foundational support of the Garden through significant annual gifts. He shared his business acumen and sage advice for decades, helping ensure Garden leadership always remained true to the core of our mission.

Buck received the Henry Shaw Medal in 1998 for his exemplary service to the Garden. We honor Buck's years of service and express our gratitude for the incredible support he gave to the Garden.



In Memoriam: Rebecca Ingram

The Garden honors our colleague, Rebecca Ingram, who passed away in late February. Rebecca served as the Garden's Vice President of Human Resources for nearly 10 years. She joined the Garden team in June 2008. In both her professional and personal life, Rebecca was dedicated to the

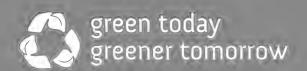
professional advancement and education of others. She was always willing to give advice to her colleagues to support their career growth—within the Garden and beyond.

Rebecca enjoyed both the beauty of the Garden and the community she helped create. She brought her family and friends to enjoy the landscape and special events, including the Japanese Festival and Garden Glow. We are grateful for the time Rebecca shared her talents with the Garden. She will be greatly missed.

Tax Reform and Charitable Giving

The new tax law became effective on January 1, 2018. To read more about what tax reform means for charitable giving visit giftplanning. missouribotanicalgarden.org/tax-reform.

Summer 2018 Missouri Botanical Garden *Bulletin* 23



The Missouri Botanical Garden strives to make the most sustainable choices possible to benefit people, plants, and the planet. That's why we offer an interactive online version of the *Bulletin* as well as a downloadable PDF. Sign up by sending an email to membership@mobot.org. Let us know if you'd like to forego your paper subscription.

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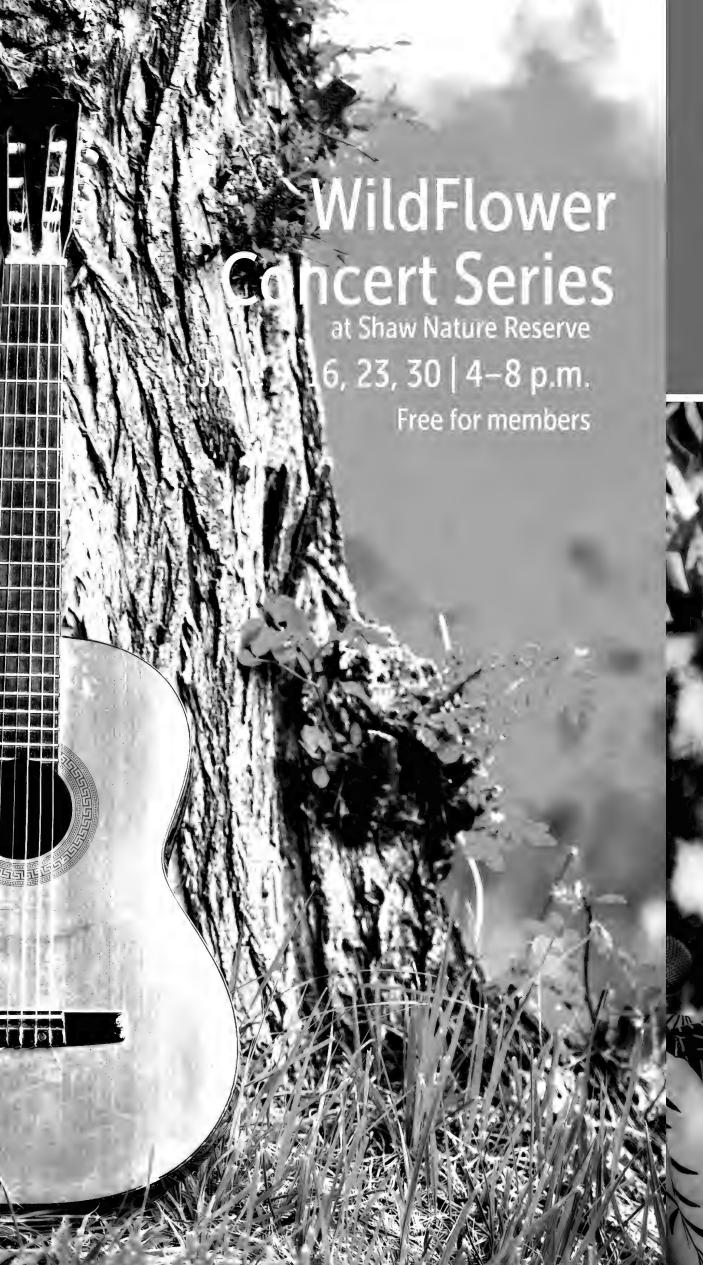
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** MISSOURI BOTANICAL GARDEN

Calendar

www.mobot.org/events

june | july | august

Member Family Picnic June 5 | 5-8 p.m. Free; reservations required

Japanese Festival mobot.org/membertuesdays

June 23 | 7–10 p.m.
\$125 membes | \$150 nonmembers

Join us for a night of opulent celebration at our Roaring Twenties-themed Metamorphosis

METAMORPHOSIS

Gala

A Roaring Twenties Affair!

at the Butterfly House

our Roaring Twenties-themed Metamorphosis
Gala. Embrace all the glitz and glamour of the
1920s with roaming performers, antique cars,
a wine pull, and a glamorous silent auction.
Guys and dolls will enjoy themed cocktails,
heavy hors d'oeuvres, and sweet confections.
Cocktail attire with 1920s flair.

Proceeds will support a new entomology lab and our future success.



butterflyhouse.org/gala

In celebration of the 25th anniversary of the Whitmire Wildflower

Garden, Shaw Nature Reserve will hold a series of Saturday concerts

Visitors are encouraged to bring chairs and blankets. Food and alcohol will be available for purchase from local vendors, including

Proved Jerry's, Six Mile Bridge, and Pinckney Bond Distillery.

shawnature.org/events

june 2018

average temperature: low 66° | high 85° average precipitation: 3.76 in.

What's in bloom?



Grass pink orchid

6/29-8/26

6/29-7/1











·	
6/2	Green Living Festival <i>Presented by Ameren</i> 9 a.m. – 4 p.m. KC
6/4-9/15	Aroid Exhibit 9 a.m.–5 p.m. Linnean House
6/5	® Member Event: Family Picnic 5−8 p.m. ☎ 📵
6/6	Whitaker Music Festival Lamar Harris 7 p.m. CA
6/6-6/8	Staff and Volunteer Sale at the shops GGS, BHGS, LS
6/9	WildFlower Concert Series Downstream 4–8 p.m. Free for members SNR
6/10-6/16	Illinois Appreciation Week 9 a.m5 p.m.
6/13	Whitaker Music Festival Charlie Halloran 7 p.m. CA
6/16	WildFlower Concert Series Gaslight Squares 4–8 p.m. Free for members SNR
6/17-6/23	ZMD Member Appreciation Week 20% off memberships
6/19	® Member Speaker Series: Cocktail Gardens— from Porch to Party! 6−7 p.m. ☎ ② ST
6/20	Whitaker Music Festival John Henry 7 p.m. CA
6/23	WildFlower Concert Series The Dust Covers 4–8 p.m. Free for members SNR
6/23	Metamorphosis Gala 7–10 p.m. ☎ \$ BH
6/26	Educator Appreciation Night 5-8 p.m. ☎ MBG
6/27	Whitaker Music Festival Acoustik Element 7 p.m. CA
6/28	® Member Preview: Flora Borealis 7–10 p.m. ☎ \$ ②

Flora Borealis-NEW! | 7-11 p.m. | \$

4–8 p.m. | Free for members | SNR

Little Shop Smalls Sale | 10 a.m. – 4 p.m. | LS

Educator Appreciation Night | 4–8 p.m. | **SNR**

WildFlower Concert Series | Flea Bitten Dawgs

july 2018

average temperature: low 71° | high 90° average precipitation: 3.9 in.

What's in bloom?

Lisianthus







Tetraploid daylily Pearl millet

6/29-8/26	Flora Borealis-NEW! 7-11 p.m. \$
6/4-9/15	Aroid Exhibit 9 a.m.–5 p.m. Linnean House
7/4	Whitaker Music Festival Funky Butt Brass Band 7 p.m. CA
7/6	Summer Buggin' Nights 4-7 p.m. BH
7/7	Bookworm Brunch with Curious George 9–10:30 a.m. and noon–1:30 p.m. ☎ \$ BH
7/11	Whitaker Music Festival Ivas John Band 7 p.m. CA
7/13	Summer Buggin' Nights 4-7 p.m. BH
7/14	Butterfly House Birthday Bash 10 a.m.–3 p.m. BH
7/17	Member Speaker Series: Perennials 11 a.m.−noon ☎
7/18	Whitaker Music Festival Al Holliday and The East Side Rhythm Band 7 p.m. CA
7/20	Summer Buggin' Nights 4-7 p.m. BH
7/21–7/21	Henry Shaw Cactus and Succulent Society Show and Sale 9 a.m. – 5 p.m. RVC
7/24	Henry Shaw's Birthday 9 a.m. – 5 p.m. Free admission at MBG and SNR
7/25	Whitaker Music Festival Dawn Weber and the Electro Funk Assembly 7 p.m. CA
7/27	Summer Buggin' Nights 4-7 p.m. BH
7/31-8/5	Little Shop Art & Chair Sale 10 a.m4 p.m. LS

august 2018

average temperature: low 69° | high 88° average precipitation: 2.98 in.

What's in bloom?









Swamp milkweed

Hardy water lily

Black-eyed Susan

6/29-8/26	Flora Borealis-NEW! 7-11 p.m. \$

6/4-9/15	Aroid Exhibit 9 a.m.–5 p.m. Linnean House
----------	---

8/3 Summer Buggin' Nights | 4–7 p.m. | BH

8/4-8/5	Greater St. Louis Iris Society Show and Sale
	9 a.m.–5 p.m. RVC

8/8	Educator Appreciation Night 5-8 p.m. 2 F	ΒI
0/0	Educator Appreciation (1910) 5 p.m. j = 1	וע

8/10 Sum	nmer Buggin' Nights	4–7 p.m. BH
-----------------	---------------------	---------------

Summer Buggin' Nights | 4–7 p.m. | BH

8/18	Missouri Botanical Garden Daylily Association
	Sale 9 a.m. – 5 p.m. RVC

8/19	Run, Walk, Stretch! Presented by Graybar
	7–9 a.m. ☎ \$

8/21	Member Speaker Series: Wonderful Water Lilies
	11 a.m.−noon ☎ ② ST

Summer Buggin' Nights | 4–7 p.m. | BH

Summer Buggin' Nights | 4–7 p.m. | BH

your garden



How to plant vegetables for fall harvest?

For success with fall vegetables, always choose fast-maturing varieties, which will produce a harvestable crop within 50 to 65 days. "Days to maturity" information is usually included on the back of the seed packet or in the catalog descriptions. This information is important for setting up a timetable to figure when to sow the seeds of individual varieties. The key to fall gardening is to time plantings so that crops are just maturing around the first fall frost date. In the St. Louis area, this date averages about October 20, give or take a week.

Prepare planting sites to ensure a quick start for each crop. Loosen the soil, dig in a generous amount of compost, manure, or other organic amendments to improve soil texture, and also work in some additional fertilizer. Seeds sprout reluctantly when soils are hot and dry, so water the planting site a day or so before you sow seeds to ensure moisture for quick germination. Sow your seeds slightly deeper than you would in cool soils, water well with a gentle spray, and then cover the seeds with burlap, old wooden boards, wet newspaper or fabric scraps. Check your seeds daily and remove the covers as soon as they start to grow.

Once the plants are up and growing, timely watering during dry spells will maintain vigorous growth and avoid setbacks which may delay or prevent harvests. By August 15 there are approximately 9 weeks left before frost can be expected.

More advice and tips at www.mobot.org/gardeninghelp.



Plant Societies' Shows and Sales

Get the latest information about your favorite plant society's show and sale by visiting www.mobot.org/plantsocieties.

KC Kemper Center for Home

Key (All events take place at the Garden unless otherwise noted.)

BH	Butterfly House
BHGS	Butterfly House Gift Shop
CA	Cohen Amphitheater
CBEC	Commerce Bank Center
	Science Education

CHD Children's Garden CL Climatron lawn

GGS Garden Gate Shop

Little Shop Around the Corner Monsanto Research Center Monsanto Hall (in RVC) **RVC** Ridgway Visitor Center SNR Shaw Nature Reserve Spink Pavilion ST Shoenberg Theater (in RVC)



Double punches at Garden Gate Shop Double punches at Butterfly House Gift Shop Reservations required Fee required

Sassafras

photos by (front) Snowboy, Karen Fletcher, Phoebe Mussman, Dan Brown, nicoletaionescu, and inaquim (this page) Daniel Yaroschevsky

JE Jordan Education Wing (in RVC)







features

10 | Magnificent Trees
Trees take center stage in the fall.

14 | Plant More, Use Less, Go Outside

Three small actions can lead to big change.

16 | Your Garden Journey Each supporter is on a journey with us.

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- 6 research news
- 8 what can you do?
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- 20 special events
- 21 shop & dine
- 22 commemorative gifts

Thank you! Your membership provides critical support for our international and local plant science and conservation work, and Garden memberships and contributions provide 23% of our annual operating funds.

To learn more about the benefits of your membership, visit mobot.org/membership, email membership@mobot.org, or call (314) 577-5118.

hours and admission

For hours and admission prices at our three locations, visit mobot.org, butterflyhouse.org, and shawnature.org.

contact

Missouri Botanical Garden 4344 Shaw Blvd. St. Louis, MO 63110 (314) 577-5100 • mobot.org

on the cover

Trees and their fall foliage take center stage this time of year (see page 10). Photo by Kent Burgess.

credits

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To discover and share knowledge about plants and their environment in order to preserve and enrich life.

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photo by Koraley Northen

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from the president



As the summer comes to an end, it is only fitting that we welcome fall this year with another chance to experience our summer exhibit, Flora Borealis (see page 5). It has been a year of climate contrasts—from long, hot, and humid days to bitterly cold winter spells. So if you have not managed

to find a day that suits you, I am sure that the fall will present opportunities for all to visit. The Missouri Botanical Garden has remained beautiful throughout!

Before all the leaves fall, however, be sure to come and witness the wonderful spectacle of colors our trees show this time of year. Head west to Shaw Nature Reserve and witness fall's fiery colors in all their glory along Interstate 44, appropriately named the Henry Shaw Ozark Corridor, and at the Nature Reserve's 2,400 acres of natural habitats. Trees take center stage in the fall, and we're inviting everyone to connect with the trees at the Garden and all around them during Tree Week (see page 10).

The Garden and Nature Reserve, along with the Sophia M. Sachs Butterfly House, are three of the region's outdoor treasures. Come discover the amazing benefits of spending time in nature, including becoming more invested in protecting our natural world for ourselves and future generations. Planting more, using less, and going outside are three key messages that get to the core of what we do at the Garden, and we hope you feel inspired after reading three incredible stories from people who are making a big difference with their actions (see page 14).

Finally, I'd like to thank you for being a member. Whether it was through an event, a class, or a school field trip, I'm glad you began your journey with us (see page 16). As the year starts to draw to a close and our festival season begins, we want to celebrate the many different ways you make our mission possible. Our second annual Member Appreciation Days are just a token of our gratitude, and we hope you enjoy the different offerings we've put together especially for you (see page 21). Thank you!

Dr. Peter Wyse Jackson, President

Parker McMillan Janet Mika

Isabelle C. Morris

Sue B. Oertli

Julie Peters

Sue M. Rapp

what's new?



Garden Welcomes One Millionth Whitaker Music Festival Visitor

Congrats to Christy Winze, the one millionth visitor to the Whitaker Music Festival! Winze was greeted at the Garden on Wednesday, June 20, by Christy Gray of the Whitaker Foundation and awarded a Garden membership and hat, a 2018 Whitaker Music Festival T-shirt, and passes to the summer nighttime exhibition, Flora Borealis. Thank you to the 49,471 visitors who enjoyed the festival this year and to everyone who has attended year after year since it began in 1996.

Made possible with the generous support of the Whitaker Foundation.

Board of Trustees Elects New Member

The Missouri
Botanical Garden
Board of Trustees
elected a new member
at its meeting in May:



John Saunders
President and Chief
Executive Officer
FleishmanHillard



New Restoration Outreach Coordinator Joins the Garden

Allison Brown joined the Garden in July as Restoration Outreach

Coordinator. Brown, who has a Bachelor of Science in Plant Biology from Southern Illinois University Carbondale, previously worked as a project leader for the Student Conservation Association and as a utility forester at Environmental Consultants for Ameren Missouri.

By sharing the ecological restoration knowledge and skills practiced at the Garden and Shaw Nature Reserve, Brown will help communities control invasive species. She will also work closely with key partners such as the Missouri Department of Conservation and the Missouri Invasive Plant Task Force. "My goal is to inspire community-driven land stewardship in the metro and rural St. Louis regions," Brown says.

Made possible with the support of Dan and Connie Burkhardt and John and Connie McPheeters.



World Flora Online Expected To Meet 2020 Target Completion Date

Garden President Dr. Wyse Jackson and other staff traveled to Bogota, Colombia, in June to attend the latest meeting of the World Flora Online (WFO). The group was pleased

to report that the WFO is expected to meet its target of having an online portal with the estimated 400,000 accepted plant species worldwide by 2020. The next meeting in December will take place in Dublin, Ireland.

Made possible with the support of the Monsanto Company.



Garden Appoints New Vice President of Human Resources

In July, Teresa Clark was appointed Vice President of Human Resources at the Garden. Her appointment followed an extensive national search. She first joined the Garden

in 2014 as Senior HR Manager and had been in an acting role as Vice President since March of 2017; she was appointed as Interim Vice President in January of 2018. Before joining the Garden, Teresa served in senior HR positions at Express Scripts, Citigroup, and other companies in the St. Louis region.

Fall 2018



Mary Claire Enger with Dr. Peter Wyse Jackson at the Volunteer Recognition Luncheon in June.

Celebrating 50 Years at the Garden

Mary Claire Enger celebrated 50 years as a Garden volunteer. Garden President Dr. Peter Wyse Jackson, Garden staff, and fellow volunteers recognized this milestone at the Volunteer Service Recognition Luncheon in June. Enger is a member of The St. Louis Herb Society, and its president Stephanie Prade had this to say during the event: "Mary Claire's presence will always be felt in this Garden. Now, and for many years to come. So, whenever you brush by a leaf, or feel the gentle breeze upon your face, the wind will whisper her name."

New Gate System To Be Installed at Shaw Nature Reserve

New entry gates will be installed at Shaw Nature Reserve this fall. After checking in at the Visitor Center, guests can begin exploring 2,400 acres of natural habitats and access the Pinetum and Trail House loop roads. The gates will also accommodate visitors attending after-hours classes and events.

As a member of the Missouri Botanical Garden, you receive free general admission every day at the Nature Reserve. To enjoy this benefit, please present your membership card at the Visitor Center, located at the entrance. Here you can also pick up a map, find out what's blooming from the helpful staff, and use your 10% shopping discount on trail guides, nature books, and more!



Special Exhibit Flora Borealis Extended Through This Fall

By popular demand, Flora Borealis has been extended! The nighttime multimedia experience will be open Thursdays, Fridays, and Saturdays through October 20.* Doors open at 6 p.m. starting September 6. Relax in the Biergarten, stroll the Garden until sundown, and enjoy the milder weather and earlier entry times. Tickets and information at mobot.org/flora.

*Flora Borealis will not take place September 1–3 (Japanese Festival), September 22 (Rock the Garden), and October 5–7 (Best of Missouri Market).



Recent Awards and Recognitions for Garden Staff

Katherine Golden, Sustainability Education Manager 30 Under 30 | St. Louis Business Journals

Dr. Robbie Hart, Assistant Curator, William L. Brown Center BioOne Ambassador Award | BioOne

Garden for the World Update: Hardy Plant Nursery

Great progress has been made on the Oertli Family Hardy Plant Nursery. The main greenhouses are now temperature-controlled, and the adjacent shade structure will soon be completed. Two propagation structures within the greenhouses are on pace to be completed in October. The temporary office building is operational, and design is nearly completed for the permanent headhouse and office building. The envelope of that building should be completed next spring. To learn more, visit mobot.org/hardyplantnursery.

research news



Among the *N. mauritianus*'s many show-stopping features are its blood-red nectar and dark purple veins.

Show-Stopping Mauritian Plant Blooms in the Climatron

This summer, the rare and endangered plant Nesocodon mauritianus was on display for the first time at the Garden. The small shrubby plant grows in just one place on the planet: high on a towering cliff, next to a rushing waterfall, on the small Indian Ocean island of Mauritius. "It's great for visitors to be able to see such a beautiful plant like as the Nesocodon," says Andrew Wyatt, Senior Vice President of Horticulture and Living Collections. "Its very presence on display in the Climatron is part of our active conservation work to safeguard the species, while also providing a wonderful educational example of the Garden's mission in plant conservation."

It's foliage is rather unremarkable, but the flower is the real show-stopper—a bell-shaped, bluish-purple bloom with dark purple veins. It stands out in other ways as well. While most plants produce clear nectar, Nesocodon nectar is blood-red. And it has a unique pollinator too, as just one of a small number of plants pollinated by geckos.

To learn more about this remarkable species, how the Garden's connection with it goes back more than three decades, and its role in the Garden's broader conservation efforts, visit discoverandshare.org.

10,482 observations

1,023 species

640+
participants

City Nature Challenge 2018 Announces Results

Take a bow, St. Louis! This year was the first time St. Louis (city and 16 counties in the bi-state region) participated in the City Nature Challenge, a global effort with 65 cities looking to observe as many plant and wildlife species during a four-day period in April. The Garden Education staff was part of the region's organizing team, and the Garden's three sites were participating locations where visitors engaged through the iNaturalist app.



Dr. Peter Wyse Jackson (left) and Dr. Paul Smith, Secretary General of BGCI.

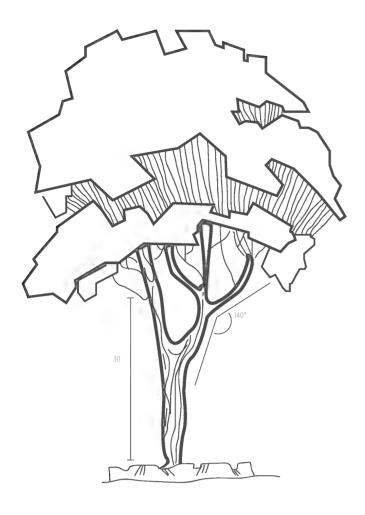
Updating Online Database of Cultivated Plants

In the spring, the Garden and Botanic Gardens Conservation International agreed to develop a second generation of the international online database of plants in cultivation in botanical gardens, PlantSearch. The new database will tie conservation

status to accession information (unique identification data) for each plant, further advancing global conservation efforts. The database was first developed in the 1990s by Diane Wyse Jackson, wife of Garden President Dr. Peter Wyse Jackson. Today, it is the most extensive repository of data on plants in cultivation in the world, containing almost 1.5 million records from over 1,000 botanical gardens.

Living Earth Collaborative Announces Grants

The Living Earth Collaborative announced its first-ever round of grants to advance its mission to study Earth's biodiversity. Five out of the nine awards were given to projects that Garden researchers collaborate on or lead. They range in scope and location from studying biodiversity in Ecuador, the Caucasus region, and the Andes to restoring Missouri woodlands and investigating the paleoenvironment in Costa Rica. The Living Earth Collaborative is a partnership between Washington University in St. Louis, the Garden, and the Saint Louis Zoo that was launched earlier this year.



Look Up: Tree Architecture

"Architecture" isn't a word that just applies to building design. Trees are a living example of architecture in action.

The creation of this intricate infrastructure happens both below ground—roots anchor the tree and reach for resources in the soil—and above ground, where gravity and sunlight shape the growth of the trunk and branches. Trees react to these factors daily, but the resulting effect on size and shape

may take years, decades, or sometimes centuries to fully manifest. Horticulturists use a variety of pruning techniques to achieve a desired architectural outcome—paying attention to not only how a cut will change the immediate appearance of a tree, but what that decision could mean years down the road.

Endowed Positions at the Garden

Understanding the history of a tree species in cultivation can support both the species and the home gardener. That's why Jennifer Smock, William T. Kemper Manager of the Center for Home Gardening, is part a Garden project studying endangered wild crop relatives in Kyrgyzstan.

Hers is one of several fundamental positions across the Garden endowed by generous donors. Endowed positions further the Garden's mission, attract and retain outstanding talent, and reduce impact on annual operating needs.

Alice H. Brown Curator of Ethnobotany | Dr. Jan Salick

Jeanette and William Ellerman Curator of Conservation Susan Cobbledick

P.A. Schulze Curator of Botany
Dr. Thomas Croat

Stephen and Camilla Brauer Conservation Geneticist Dr. Christine E. Edwards

Whitmire Family Curator of Native Plants at Shaw Nature Reserve Scott Woodbury

William T. Kemper Manager of the Kemper Center for Home Gardening Jennifer Smock

B. A. Krukoff Curator of African
Botany | Appointment Pending

William L. Brown Curator of Economic Botany | Appointment Pending



The View
From Above
David Gunn
Horticulturist
and Arborist

Horticulturist David Gunn oversees the Charbonnier English Woodland Garden. He began working for the Garden as a rosarian in 2012, which is also when he joined the Garden's Tree Crew. It was a natural fit for Gunn, who has been climbing trees since childhood. He achieved Certified Arborist status through the International Society of Arboriculture in 2016, and now leads the Tree Crew through various climbing and pruning projects. One of his favorite trees to climb in the Garden is a giant pin oak in the English Woodland Garden. "There's just something special about ➤ being in the canopy," he says. "And I really don't think you can get a full appreciation for a tree, especially its architecture and its way of being, than to

In addition to caring for the trees,
Gunn also goes on scouting and
collecting trips. In 2017, he collected
Arkansas oak acorns. The species,
considered vulnerable in the wild, is now
in propagation in Garden greenhouses.
This fall, he'll travel to Kyrgyzstan to
collect seeds from threatened fruit trees
as part of a larger conservation project.
He is also a tree climbing facilitator for
Vertical Voyages, which offers Canopy
Climb at the Garden and Shaw Nature
Reserve throughout the year.

To learn more about what Gunn and the rest of the Tree Crew do to care for the Garden's tree collection, see page 10.

what can you do?

Come Grow with Us!

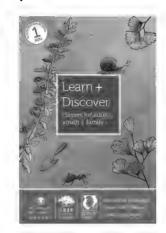
The Missouri Botanical Garden, Sophia M. Sachs Butterfly House, and Shaw

Nature Reserve are more than just beautiful destinations. They are

living classrooms that connect people of all ages to the wonderful world of plants—from cooking, painting, and photography courses to green living, outdoor exploring, and gardening classes. Registration for the fall/winter session is now open, and you will find something for everyone.

Now is the perfect time to learn a new skill, discover a new passion, or reconnect with the natural world in a whole new

way. Members save on registration for all classes! Visit mobot.org/classes.





Take Your Education Beyond the Classroom

Learn with us at the Garden while earning your master's degree from Miami University through the Advanced Inquiry Program (AIP). This new opportunity, starting in the summer of 2019, is open to any applicant with

a bachelor's degree, regardless of academic major or profession. AIP offers a ground-breaking master's degree that combines web-based graduate courses through Miami University with face-to-face experiential and field study at some of the nation's premiere community learning institutions, including the Garden. If you're interested in advancing your career through global leadership, community engagement, and environmental stewardship, learn more at mobot.org/AIP. Enrollment for summer 2019 opens September 1, 2018.



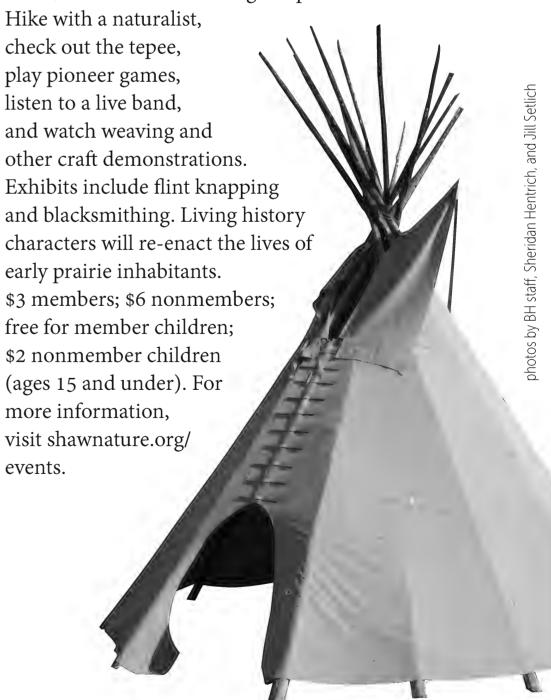
Visit New Caledonia Exhibit in Sachs Museum

The island of New Caledonia is a globally recognized biodiversity "hotspot," and the Garden has been studying its plants since the 1970s. Learn more

about the important work being done to document and protect the island's flora with a new exhibit in the Stephen and Peter Sachs Museum, featuring a selection of some of the most interesting and highly threatened species in New Caledonia. The Sachs Museum opens at 9:30 a.m. every day.

Celebrate Rare Grasslands During Prairie Day at Shaw Nature Reserve

Hitch up the wagons and head out to Prairie Day September 22 from 10 a.m. to 4 p.m. This fun-filled family event portrays prairie heritage and showcases our 250-acre re-created tallgrass prairie.



Get Rockin' With Special Presentations

Join us for two special back-toback presentations by Marcia Tatroe October 20 from 10 a.m. to noon in the Shoenberg Auditorium. The renowned author and photographer will present "Rockin' with Cacti and Succulents" and "Going Beyond

Alpines—Expanding Your Plant Palette," focusing on garden design, rock

> gardening, xeriscape, and native plants. These free events are hosted by the Henry Shaw Cactus and Succulent Society and the Gateway Rock Garden Society.



Join Us for the Seasonal Closing of the Children's Garden

Wrap up Tree Week (see page 13) and join us November 3-4 from 9 a.m. to 3 p.m. as we put the Doris I. Schnuck Children's Garden to bed. Enjoy two festive, fun-filled days of hands-on activities celebrating the changing of the seasons. See what's ready to harvest in the edible garden, pot an edible plant to take home, enjoy live music, visit with World Bird Sanctuary experts, and meet our mascot Finn. More information at mobot.org/finn.





Enjoy Member Appreciation Days

Members make our mission possible, and we want to show our appreciation! The second annual Member Appreciation Days offers benefits across all three Garden sites, November 5–11. Enjoy membership discounts, sales, and special programs! (see page 19 for details).

magnificent

TRES



Fall is the best time of year to view one of the Garden's oldest, yet often overlooked collections. In a display that ranges from bright golden yellow to muted copper to deep scarlet, our trees and their fantastic fall foliage take center stage every October. In celebration of our colorful canopy, the Garden is kicking off Tree Week—offering visitors the opportunity to learn more about this impressive collection.

The Collection

The Garden's canopy is made up of more than 5,500 trees, and that's just at the main campus in the City of St. Louis. The Garden's Shaw Nature Reserve in Gray Summit has its own expansive canopy, showcasing the woodland habitat of our region. And there are tropical trees under glass both inside the Climatron and at the Sophia M. Sachs Butterfly House, located in Chesterfield. The Garden's collection is highly curated, multi-layered, and incredibly diverse. It includes towering Missouri-native pin oaks, small-but-showy star magnolias from Japan, and everything in between—representing more than 1,100 species.

While some trees date back to Henry Shaw's time, it's not a stagnant collection. "Maintaining tree cover in a garden is called canopy management planning," says Andrew Wyatt, Senior Vice President of Horticulture and Living Collections. "Planting is staggered and strategic, so you always have new trees coming along to replace those that die." The canopy management plan includes an increased focus on conservation. The Garden is already a home to a number of endangered or vulnerable tree species, and the horticulture staff works to identify threatened trees from around the world and add them to the collection.

The collection is also curated on the needs of the plants below. For example, the leafy-green canopy of the English Woodland Garden is the perfect setting for a shade-loving understory. Plants that prefer to soak up more sun, like boxwoods, are grown in areas where tall trees cast only occasional shadows.

Taking Care of Our Trees

Just like the rest of the Garden's living collections, trees need proper care to keep them healthy. Horticulturists use a multifaceted approach, beginning with something called a tree risk assessment. This is a health and safety evaluation of any tree that poses a potential hazard, especially where large limbs grow above a walking path. The data is used to identify the types of treatment needed and to prioritize a project list.















That's where Tree Crew comes in. This group of Garden horticulturists works to maintain the largest trees in the collection. Supervisor Ben Chu, who has been taking care of the Garden's trees for more than 30 years, leads the team. David Gunn (see page 7) handles the day-to-day execution. The rest of the team includes Garden horticulturists who volunteer their time on top of their day-to-day responsibilities. Like Chu and Gunn, other Tree Crew members have achieved Certified Arborist status through the International Society of Arboriculture.

Busy season begins in the fall and lasts into early spring. A typical day begins by loading up the gear—helmets, gloves, climbing rope, harnesses, hand saws, and chain saws. The crew gets access to the canopy through traditional harness climbing or with the help of a hydraulic lift. The lift allows safer, easier, and quicker access to the canopy.

Tree work may look cosmetic, but is always done with a goal in mind. Removing dead wood helps improve visitor safety and prevent internal rot. Thinning the canopy allows the understory plants to benefit from more sunlight. And pruning can influence tree architecture, while also promoting a more sound structure. The work can also be more drastic, such as removing large limbs or even taking down an entire tree. About a dozen trees were removed this past winter after showing signs of decline. Often a tree that looks healthy to the untrained eye from the outside reveals dangerous interior rot after being cut down.

While taking down a tree can be a dramatic change, Garden staff are also planting new ones all the time. More than 1,000 trees have been added to the collection in the past 15 years. Much like their older and larger counterparts, these young trees are also assessed for health and branching structure to make sure they will be part of the canopy for years to come.

Protecting our Trees

The Garden protects trees and keeps them healthy in ways beyond pruning and removing dead wood. Species at risk from pests and disease are often treated with the equivalent of tree vaccines, protecting ash trees from the emerald ash borer or elm trees from Dutch elm disease. The roots of some trees also get special

care; air spading helps break up compacted soil, and a growth regulator helps trees divert energy from the canopy to building stronger roots.

The often unpredictable St. Louis weather is another ever-present threat to the collection. A tornado destroyed hundreds of Garden trees in the summer of 1896. Drought, heavy rain, and cold snaps can also damage the collection, especially non-native trees that aren't adapted to local conditions. More than 93 trees are outfitted with special lightning protection. Gamma Tree Experts generously provided protection for 63 of those trees, beginning in 2013. "We are proud to have provided the labor to protect these trees as a gift to the Garden," says Tim Gamma, President of Gamma Tree Experts. "We've had a strong partnership with the Garden for many years, supporting tree maintenance. We aren't a huge corporation, but this lightning protection is a significant way we could contribute to a place that means so much to our community."

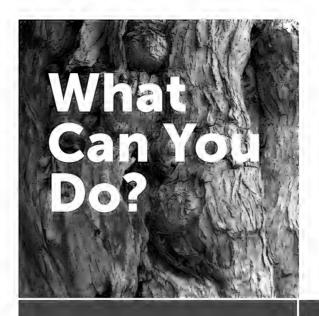
Nature, however, has a way of thwarting even our best efforts to protect our trees. This past spring, a storm brought down a European beech in the English Woodland Garden. A downed tree would usually be cut up, mulched, and used on Garden grounds, but this particular specimen will be left in place as an example of the natural life cycle of a woodland habitat.

Trees Year-Round

Although our trees certainly look fantastic in the fall, there are plenty of reasons to admire this collection in every season. Winter provides a fantastic opportunity to appreciate the architecture of our trees (see page 7)—the twisting branches and textured bark laid bare by the falling leaves. Magnolia blooms and cherry blossoms herald the return of warmer weather each spring, followed by other flowering trees like dogwood and redbud. And in summer, escape the St. Louis heat under the shade of our leafy green canopy. The Garden's tree collection is truly designed to be enjoyed year-round. You just have to remember to look up.

Learn More!

Read more about our tree collection, Tree Crew, the trees at Shaw Nature Reserve, and more at discoverandshare.org.



TREE WEEK

October 29-November 4 mobot.org/treeweek

Celebrate our tree collection, the trees in your life, and the season when trees' fall colors take center stage »

» Tree Tours

Public tours at 11 a.m. and 1 p.m. daily in the Ridgway Visitor Center.

» Tree Tales

Share your tree stories online using #mbgtreetales or on-site in the Ridgway Visitor Center and Brookings Exploration Center.

» Tree Talk

Join us on Tuesday,
October 30 in the
Shoenberg Theater
at 11 a.m. for a panel
discussion with tree
experts. Free, but
reservations required:
(314) 577-5118 or
mobot.org/treeweek.

TREE LEGACY

Many people choose to make trees a part of their legacy.

At the Garden, you can leave a tree legacy of your own. To learn more, see page 23.

HOME GARDENING

Every tree is unique and reacts differently to pests, disease, and environmental factors. Learn more about proper care for the trees in your yard »

- » Visit the William T. Kemper Center for Home Gardening
- » Call the Horticulture Answer Service at (314) 577-5143
- » Send your questions to plantinformation @mobot.org.

Fall 2018 Missouri Botanical Garden *Bulletin* 13









(clockwise from top) Nancy Hartman (third from right) at the volunteer event she organized to remove honeysuckle and other invasives from the Bellerive Bird Sanctuary. Britt Tate-Beaugard (right) with Carver Elementary students and Mary Ann Lazarus, of the U.S. Green Building Council-MO Gateway Chapter, after winning 2nd place in the 2017–2018 Green Schools Quest. Bob Bellamy and his son David exploring Shaw Nature Reserve.

Save the Earth.

It's an inspiring but daunting call to action. In a world where time and resources seem to be more scarce, it's hard to think about what one can do to help. However, every small action has a ripple effect. Simple things like planting more natives and removing invasives benefit people and wildlife alike. Plants provide shelter, food, medicines, and more. The more plants, the better. Using less in our lives—less water, less plastic, less energy—helps preserve natural resources and keep the environment cleaner and healthier for plants and people. Going outside and spending time in nature is good for your physical and mental well-being, and it increases appreciation for our planet.

Plant More. Go Outside. Use Less.

Three small actions that can lead to big change. Three big ideas that get to the core of the Garden's mission to discover and protect plants locally and around the world. But we can't and don't want to do it alone.

We invite you to enjoy these three stories of people who, after being inspired by the Garden's work, took a small step that turned into a big wave of change, making a difference in their lives and their community.

What Are You Inspired To Do?

Join us for a special Wild Ideas Worth Sharing evening event celebrating these stories and more on Thursday, November 8 at 5:30 p.m. in the Shoenberg Auditorium. Free and open to the public.



Nancy Hartman Plant More

Nancy has lived in the Bellerive Acres neighborhood in North St. Louis County for many years. But it wasn't until a few years ago that she learned more about how bush honeysuckle crowds out native plants and threatens biodiversity, particularly in the bird sanctuary right in her backyard. She took the "Invasive Plants in Your Yard" class at the Garden in 2016, and since then, she has built a community that tackles invasives and helps protect the bird sanctuary. The next steps are to plant native grasses, shrubs, and trees for insects and birds to thrive.

"I feel that I can be part of a community that's working to make the world better. I don't have to know everything myself, and I don't have to be able to do everything myself. But there are all these wonderful people in the community who will show me, teach me, and bring other people to help. We are doing something positive."



Brittany Tate-Beaugard **Use Less**

As the art teacher at Carver Elementary School in St. Louis City, Britt was creative in obtaining and preserving the resources she used. She knew, however, that she could do more. With the help of the Garden's EarthWays Center, she connected with a network of sustainability experts and started her one-woman crusade to transform the whole school into a model of sustainable practices that also have a positive impact on

"I want to make a difference in our district. I realize that being green isn't always the cheapest route, so I decided that this school year I was going to do everything that I could to show that we change the way we think about waste in school. If we can do it at Carver, schools can do it anywhere."

the triple bottom line: people, resources, and the environment.



Bob and David Bellamy 🐔 Go Outside

Bob realized early on that his three-year-old son David had a strong desire to be outside. So, he pushed past his aversion to the outdoors to enjoy life through David's eyes. He picked up a Meet Me Outdoors in St. Louis map at the Garden, which showcases 50 outdoor gems in Missouri and Illinois and 100+ outdoor experiences. Together, they have been checking them off one by one.

"Growing up, I was a very 'indoorsy' kid. This experience has shown me how important nature is and how important it is to experience it. It's the difference between saying abstractly that you want to protect the Earth and now having a connection to these [places]. As a family, I think we're even more invested in it. We don't want these places to go away and don't want these places to be unprotected."

Watch the video and read more about each story at discoverandshare.org

Fall 2018 Missouri Botanical Garden *Bulletin* 15



It might have been feeding the koi with your family. Perhaps it was an elementary school trip. Maybe it was a concert on a summer night. You may have attended a special festival or a friend's wedding. At some point, you began a journey with the Garden.

Along that journey, you became a member. You received special benefits and discounts. You learned about our plant collection and our conservation efforts. You attended classes and events across our three locations.

The Garden became a part of your life. And you became a part of the Garden. You told friends about coming events. You gave your favorite teacher a gift membership. You brought your family here when they visited St. Louis.

In each of these ways, you advocated for the Garden. You shared our mission with more and more people, telling them about our role in the community and beyond. Every time you made a gift, your philanthropy helped us continue to protect plants. You helped us grow.

Each and every supporter of the Garden is on a journey with us. Together, we are growing stronger. Like the plants we care for, each step along this path grows deeper roots.

Like the plants we care for, the work of the Garden is always growing and evolving. We work across the world, discovering plants and learning the best ways to protect them. We share with governments, scientists, and kids on elementary school trips how plants grow, how they change, and what they need.

We are so proud to be on this journey with you. We love learning how you connect with our work. Let us know when you watch a pollinator's chrysalis open at the Butterfly House. Show us that native bloom you photograph at Shaw Nature Reserve. Share that story from your water garden class. We'll be there—every step of the way.

Take The Next Step

This fall, learn more about the plant science at the core of our mission. Check out "The Future of Agriculture" in our Discover + Share blog, and make a special gift today to support our plant scientists and their global efforts at mobot.org/donate18.



ONE JOURNEY: DAVID T. ORTHWEIN

In the thirty years since he purchased his first 345 acres of Illinois farmland, David Thornley Orthwein's career reflects the very nature of farming and agriculture: it's always evolving.

David is the greatgrandson of William

D. Orthwein, whose international grain trading firm was, at one point, one of the oldest and largest in the area. He is also the great-great grandson of St. Louis brewer Adolphus Busch. After earning his Bachelor in Science in Agricultural Economics from Cornell University, he became a securities analyst. During that time, in the middle of the farm crisis, he purchased his first farm in 1987.

David went on to earn his Master of Business Administration from The Olin School of Business at Washington University in St. Louis. Having broken into the farming business early, he continued to build his career around agriculture. "I chose to invest the capital I had in an income-producing farm and build a relatively small house," he says. Today, his business has grown to 6,000 acres in Missouri and Illinois.

He has also played a significant role supporting important projects like Forest Park's Statue of St. Louis and the Bridges Program of the Society of St. Vincent de Paul. Providing his expertise in agriculture, farming, and business development, David serves on the advisory boards of the Boeing Institute of International Business at Saint Louis University and the Garden's Shaw Nature Reserve. In the past, he served on the advisory board of the Missouri chapter of The Nature Conservancy. "I don't think there's a huge difference in perspective between farmers and conservationists really," he says. "Good solid land stewardship is good solid land stewardship."

That land stewardship is also what draws David to the Garden and our conservation work. "I think what Dr. Peter Wyse Jackson is doing is very good because, let's face it, what a botanical garden did in 1950 and what it's doing today are two very different things," he says. "Botanical gardens clearly have to evolve and have to become plant repositories, because when something is lost, it's lost forever."

just for members





Information and registration at (314) 577-5118 or mobot.org/memberevents unless otherwise noted.







Member Speaker Series: Inside Urban Farming

September 18 | 11 a.m.noon | Shoenberg Theater
Join Mimo Davis and
Miranda Duschack of
Urban Buds for a look
inside their Dutchtown
farm. Learn about
sustainable gardening
and their favorite
bouquet of backyard
flowers. Reservations
required; space is limited.

Butterflies & Blooms

September 30 | 11 a.m.1 p.m. | Butterfly House
Children and their
families are invited to
learn all about butterflies
and plant a miniature
butterfly garden* of
their own! Enjoy stories,
games, and a trip through
the conservatory.
Reservations required;
space is limited.

*This event is ideal for children ages 3–12. Each child 12 and under will receive basic supplies to make one miniature garden.

Member Speaker Series: The Microbiome of the Garden

October 16 | 11 a.m. – noon | Shoenberg Theater

Explore the Garden through the lens of microorganisms with nationally renowned nature and food writer Eugenia Bone. Compare the microbiomes of plants and people with gardens and families. Book signing to follow. Reservations required; space is limited.

Ghouls in the Garden October 28 | 11 a.m.-

1:30 p.m. | Linnean Plaza Presented by Macy's Gives
Come in costume and enjoy members-only trick-or-treating around the Garden. See the circus, dance with trolls, huff and puff with the Three Little Pigs, and more! End your day with free play and educational activities in the Children's Garden.
Reservations required.

November 5-11, 2011 M. E. M. B. E. R. APPRECIATION DAYS

This November, we want to say

Members are at the heart of all we do, and we simply could not do our important work without you.



for your generous support!

Visit mobot.org/memberappreciation for a full schedule of events and to register for ticketed programs.

Exclusive Offers (valid Nov. 5-11)

Save 20% on Membership

This final membership sale of the year offers 20% off Individual through Festival levels of membership. Join, renew, or give a gift membership on-site at the Garden, Butterfly House, or Shaw Nature Reserve, by phone at (314) 577-5118, or online at mobot.org/membership.

Membership discount cannot be combined with other offers or the Automatic Renewal Program/monthly installment options.

Save 10% at Sassafras café

Present your membership card at the café and save 10% on all purchases during Member Appreciation Days.

Save 40% on Shaw Nature Reserve Merchandise

Show your love of the Nature Reserve with logo merchandise like hats, mugs, and shirts available at the Visitor Center.

Garden Gate Shop

Stop by the Garden Gate Shop and enter to win a free raffle for a \$100 holiday shopping spree. Enjoy daily specials and samples throughout Member Appreciation Days.

Special Events

Butterfly House Member Morning

November 5 | 10 a.m. – noon

Kick off Member Appreciation Days with private access to the Butterfly House. Meet entomology experts, tour the conservatory, and enjoy light refreshments. Little ones can make a keepsake to take home. Reservations required.

Daily Drop-In Tours

November 5–11 | 11:30 a.m. | Location varies by day Meet other members and join us for drop-in walking tours:

- November 5 and 6 Missouri Botanical Garden (Victorian District and Sachs Museum)
- November 7, 8, and 9 Butterfly House (Winter Jewels in the Conservatory)
- November 10 and 11 Shaw Nature Reserve (Bascom House)
- Reservations are not required. Check in at the Membership Desk or ticket counter upon arrival.

Member Speaker Series: Holiday Decorating

November 7 | 11 a.m. and 2:30 p.m. | Shoenberg Theater Get into the holiday spirit with David J. Bovier of Ken Miesner's Flower Shoppe during this popular annual program. Learn about the latest floral and decorating trends to deck your halls for the holidays. Reservations required; space is limited.

Little Shop Around the Corner Holiday Open House November 7 | 10 a.m. – 5 p.m.

Browse high-quality antiques and collectibles for everyone on your holiday shopping list at this exclusive open house for members only. Receive a special 40% off the Little Shop's one-of-a-kind offerings.

Fall 2018 Missouri Botanical Garden *Bulletin* 19



Japanese Festival September 1-3

Experience shodo calligraphy, the thunderous pounding rhythms of the taiko drums, the thrilling Shishi–Mai dance, and more! Join or renew at the event and get in for free. More at mobot.org/japanesefestival.



October 5-7 mobot.org/market

Join us for a weekend of fall fun! More than 120 food producers and crafters offer baked goods, flowers, herbs, handcrafted items, baskets, wooden toys, custom jewelry, and more. Enjoy live music and a kids' corner with crafts and fall activities. Join or renew at the Market and get in free.

NEW! Friday open 12-8 p.m.*

*Garden closed October 5 until the Market opens at noon



Shaw Wildflower Market September 7 | 2–7 p.m. | Shaw Nature Reserve

Shop locally produced native plants, food, and crafts. \$5 adults; \$3 seniors; free for members and children (ages 12 and younger). More at shawnature.org/events.

Rock the Garden September 22 | 7–11 p.m. You're invited to a special night of fabulous food, signature cocktails, and an exclusive live performance by The Samples. Enjoy a private viewing of Flora Borealis. \$300 VIP member ticket; \$350 VIP nonmember ticket; \$125 member ticket; \$150

nonmember ticket. Information

and tickets at mobot.org/rock.



Spirits in the Garden October 26 | 6-9 p.m.

Celebrate All Hallows' Eve with botanical spirits, a costume contest, a scavenger hunt, circus performers, and ghost stories. \$20 members; \$30 nonmembers. Cash bar and food for purchase available. Attendees must be at least 21; mobot.org/spirits.

Booterfly House

October 1-31 | 10 a.m.-4 p.m. | closed Mondays | Butterfly House Celebrate all things creepy and crawly this October. Meet new frightful friends in the Scorpion's Lair, watch out for Botanicals Gone Mad in the conservatory, and spy on spectacular spiders with Little Miss Muffet. All events included with admission; free for members. More at butterflyhouse.org.



Holiday Wreath Display and Auction

November 16-January 1 Monsanto Hall

View unique creations donated by some of the area's finest floral designers. Wreaths are sold by silent-auction bidding with proceeds benefiting the Garden's Horticulture

Department.



November 17-January 1 Member Preview | November 16 Presented by Wells Fargo Advisors

Celebrate the season with one million lights, fun new experiences, and traditional favorites. Tickets on sale September 17 for members and September 24 for the general public. Visit mobot.org/glow.

Niehaus, Bethany Ottens, and Ning He photos by Karen Fletcher, Lisa Delorenzo Hager, Kai

shop & dine

From gardening tools and unique toys to vintage items and local products, the Garden shops have just what you're looking for.

Look for these icons to know where each event or sale is taking place.



Garden Gate Shop

4344 Shaw Blvd. St. Louis, MO 63110 Monday–Sunday 9 a.m. to 5:30 p.m. (314) 577-5137



Butterfly House Gift Shop

15193 Olive Blvd. Chesterfield, MO 63017 Tuesday–Sunday 10 a.m. to 4 p.m. (314) 577-9477



Little Shop Around the Corner

4474 Castleman Ave. St. Louis, MO 63110 Tuesday–Saturday 10 a.m. to 4 p.m. Sunday, noon to 4 p.m. (314) 577-0891

New Fall Menu at Sassafras

Sassafras, the Garden's café, will be rolling out a new menu featuring the flavors of fall and winter. Visit us on October 3 to be the first to try the new items! Sassafras is open from 7 a.m. to 4 p.m. on Wednesdays and Saturdays, and from 9 a.m. to 4 p.m. the rest of the week. Lunch is served everyday from 11 a.m. to 3 p.m.

First Fridays Are Member Double Days

First Friday of each month | All Garden members receive 20% off purchases or double card punches on the first Friday of each month.

Café Flora

April—October | 10 a.m.—2 p.m. Sundays | Spink Pavilion

Sit at the iconic Spink Pavilion to enjoy a delicious brunch, featuring bottomless mimosas for \$18. No reservations necessary, but we can accommodate large groups if needed. Gift certificates available. Email Carleen at ckramer@cateringstlouis. com for more information.

Around the World Wine Dinners

Third Thursday of the month | March–October | 6:30 p.m. | Spink Pavilion

Travel to wine-producing regions through a five-course dinner paired with a different wine from the same region. \$70 (plus 18% service charge and tax). Advance reservations required: (314) 577-0200.

Green Earth Art Trunk Show

November 3–4 | 11 a.m. –4 p.m. | ₩ Check out the concrete castings for your home and garden that celebrate nature and beauty.

Plan Your Holiday Events

Plan a unique corporate party this holiday season at Garden Glow. Our 2-hour corporate packages are the ideal way to thank your customers, treat your staff, and network with colleagues. For more information and to book your event, email Katie at kkramer@cateringstlouis.com.

Little Shop Around the Corner Holiday Open House

November 7 | 10 a.m. – 5 p.m. | A Don't miss this exclusive open house for members only during Member Appreciation Days. Details on page 19.

» staff picks



Herbaria Essential Oils

The same pure essential oils St. Louisbased Herbaria uses to scent its popular soaps are now available in the Garden Gate Shop for \$12.99. Scents include citronella, laurel berry, rosemary, lavender, eucalyptus, and tea tree.



Lavender Pitcher

Add this unique lavender pitcher to your serveware. Only \$30 with any purchase at the Garden Gate Shop. While supplies last. See shop for details.

Check I Out

commemorative gifts

April-June 2018. A commemorative gift is a wonderful way to honor family and friends. Beginning July 1, 2018, gifts of \$100 or more are listed in the Bulletin. For more information about giving opportunities, call (314) 577-5118 or make a commemorative gift at mobot.org/tributes.

In Honor of

Glenda Abney

Daniel and Henry **Insurance Agency**

Walt Alexander

Chesterfield Hill Garden Club

Tom Allen and Dan Fuller Darrell Fears and Dan Cullom

Miss Kate Barnes

Laura and Tom George

Lynn Bartels

2018 Thesis Students (Casey, Veronica, Ryan, and Meghan)

Anthony Bassett

Mrs. Noel Bortle

Gordon and Terry Bloomberg

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Cathy Whitmire

Dr. Carolyn Wolff

Mr. and Mrs. Paul Lux

Scott Woodbury

The St. Louis Master

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Joshua Sutlive

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April–June 2018. For more information, call (314) 577-5118 or visit mobot.org/donate.

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April–June 2018. Call (314) 577-5118 or visit butterflyhouse.org/donate to learn more.

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Make Trees Part of Your Legacy

We connect with trees. We watch them grow from tiny seedlings into majestic canopies and know they may last long after we are gone. Many people choose to make trees a part of their legacy, showcasing this connection.

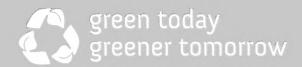
At the Garden, you can leave a tree legacy of your own. Legacy donors can make a planned gift to support a favorite tree species, commemorate a life while supporting an endangered tree, or make a gift to the arboriculturists who care for your favorite maples or cypress. You can endow positions to ensure our trees always have the expert care they need. You can support horticultural exploration across the globe, protecting trees in their native habitats. You can restore habitats right here in your community, protecting the trees in our backyards.

To learn more about creating a tree legacy and becoming a part of the Heritage Society, visit mobot.org/plannedgiving, call (314) 577-5173, or email plannedgiving@mobot.org.



Join us for a presentation to learn about creating your Garden legacy and about charitable gift annuities with Garden Trustee Edward D. Higgins.

Friday, September 14 | 10:30–11:30 a.m. -or-Wednesday, October 10 | 2:00–3:00 p.m. Shoenberg Theater | Ridgway Visitor Center RSVP required | (314) 577-5173 or rsvp@mobot.org



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October 28 | 11 a.m.–1:30 p.m. Presented by Macy's Gives

Free for members | Reservations required

Come in costume and enjoy members-only trick-or-treating around the Garden at themed stations. See the circus, dance with trolls, huff and puff with the Three Little Pigs, and more! End your day with free play and educational activities in the Children's Garden.

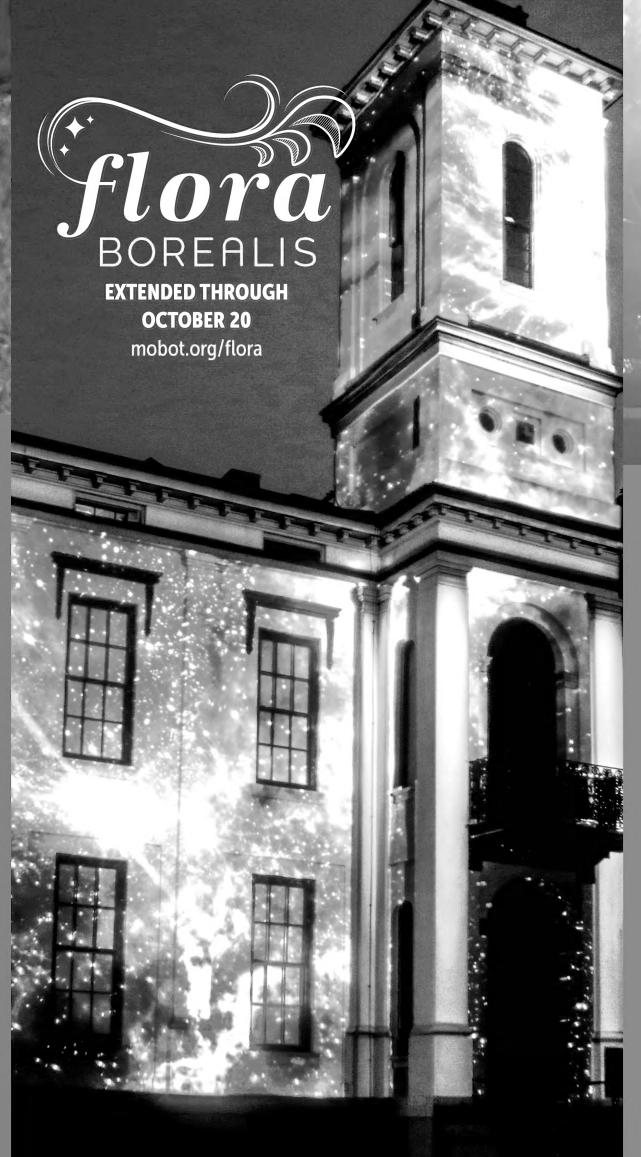
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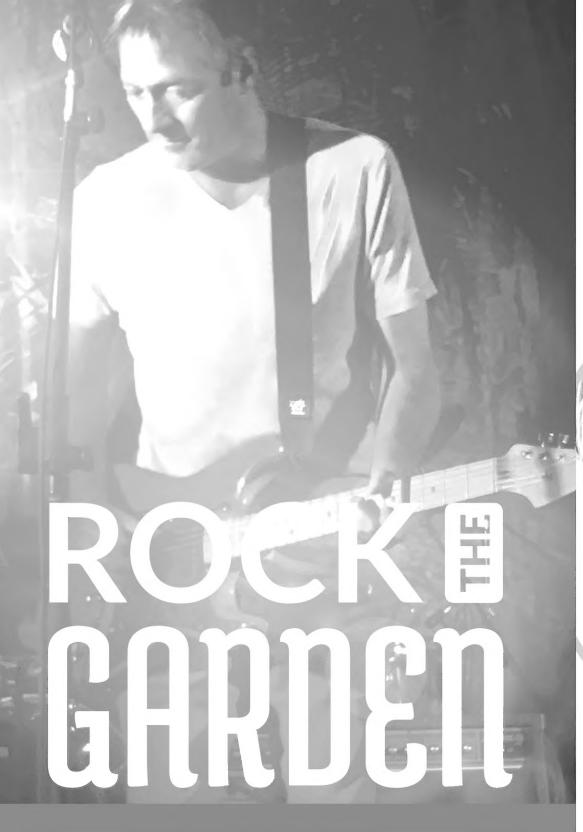


calendar

www.mobot.org/events

september | october | november







September 22 | 7–11 p.m.

\$300 VIP member ticket \$350 VIP nonmember ticket \$125 member ticket \$150 nonmember ticket

You're invited to a special night of fabulous food, signature cocktails, and an exclusive live performance by The Samples.

Experience a private showing of Flora Borealis at this special fundraiser.

mobot.org/rock

M•E M•B E•R APPRECIATION DAYS November 5-11



This November, we are saying "Thank You!" for your generous support. Highlights include 20% off membership, 10% off in Sassafras, free Holiday Decorating event on November 7, daily tours, and more.

mobot.org/memberappreciation

september 2018

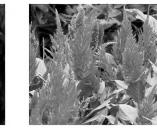
average temperature: low 60° | high 80° average precipitation: 2.96 in.

What's in bloom?



9/1-9/3





Long leaf speedwell

Corkscrew flower

Feather celosia

Japanese Festival

September 1: 10 a.m.-8 p.m. | \$ September 2: 10 a.m. – 8 p.m. | \$ September 3 (Labor Day): 10 a.m.-5 p.m. | \$

Shaw Wildflower Market | 2-7 p.m. | \$ SNR

Evelyn E. Newman Founder's Day Celebration 10 a.m. – 4 p.m. | BH

Member Speaker Series: Inside Urban Farming 11 a.m.−noon 🗗 📵 ST

Prairie Day | 10 a.m.-4 p.m. | \$ SNR

Rock the Garden | 7–11 p.m. | **☎** \$

Butterflies & Blooms | 11 a.m.−1 p.m. | ☎ 📵 BH



october 2018

average temperature: low 48° | high 68° average precipitation: 2.76 in.

What's in bloom?







Pink muhlygrass

10/1-10/31

Japanese anemone

Booterfly House | 10 a.m.-4 p.m. (closed on Mondays) | BH

Spider mum

Best of Missouri Market

10/5-10/7

NEW! October 5: 12–8 p.m. | \$ (Garden closed in the morning) October 6: Members-Only Shopping Hour | 8–9 a.m. October 6: 9 a.m. – 5 p.m. | \$ October 7: 9 a.m. – 5 p.m. | \$

Member Speaker Series: The Microbiome of the Garden | 11 a.m.−noon | ☎ 📵 ST

Wicked Wings and Wine | 5:30−7:30 p.m. | **☎** \$ BH

10/19-10/20

Fine Gardening Symposium | ☎ \$ SNR October 19 | 4:30-7 p.m. October 20 | 8 a.m.-4 p.m.

Marcia Tatroe Presentations | 10 a.m.-noon | ST Presented by the Henry Shaw Cactus and Succulent Society and the Gateway Rock Garden Society.

Wicked Wings and Wine | 5:30−7:30 p.m. | ☎ \$ BH

10/26–10/27 Bug Ball | 5:30–7:30 p.m. | **☎** \$ BH

Happy Halloween Maze 3-7 p.m. \$ SNR

Spirits in the Garden | 6-9 p.m. | \$

Member Event: Ghouls in the Garden Presented by Macy's Gives | 11 a.m.−1:30 p.m. | ☎ 🗐

10/29–11/4 Tree Week | 9 a.m. – 4 p.m.

Tree Talk | 11 a.m.–noon | ☎ ST

november 2018

average temperature: low 37° | high 54° average precipitation: 3.71 in.

What's in bloom?







Foster holly

Eulalia Winter's sunflower

10/29–11/4 Tree Week | 9 a.m.–4 p.m.

11/3-11/4

Doris I. Schnuck Children's Garden Seasonal Closing | 9 a.m. – 3 p.m. | \$ CHD

11/5-11/11

Member Appreciation Days

11/6-12/30

Winter Jewels | 10 a.m.-4 p.m. (closed on Mondays, Christmas Eve, and Christmas Day) | BH

Member Speaker Series: Holiday Decorating 11 a.m. and 2:30 p.m. | ☎ 🗟 ST

Little Shop Around the Corner Holiday Open House | 10 a.m. – 5 p.m. | LSAC

11/16-1/1

Holiday Wreath Display and Auction 9 a.m.-4 p.m. | RVC

Garden Glow Member Preview

11/16 5–10 p.m. | **☎** \$ **②**

Presented by Wells Fargo Advisors

11/17-12/30

Victorian Christmas at Tower Grove House Wednesdays-Sundays | 10 a.m.-4 p.m.

Garden Glow | 5–10 p.m. | Closed Christmas Eve **11/17–1/1** and Christmas Day | \$ Presented by Wells Fargo Advisors

11/17-1/1

Gardenland Express | 9 a.m.-4 p.m. | \$ RVC Presented by Wells Fargo Advisors

your garden



When can I pick my apples?

It isn't always easy to determine when to harvest apples. If you know what to look for, you can harvest apples at their peak. Apples picked at the right time keep longer in storage.

Pick apples before they fully mature. You can gauge apple maturity from signs including: changes in fruit skin color, fruit crispness, and loss of a starchy taste.

For the most reliable signs, look at the change in the apple's background color. When most apples mature, this background color changes from a leaf green to a lighter shade of green and eventually to a yellowish color. You can pick most apple cultivars when the first signs of yellowing appear.

You can also tell if your apples are ready by how easily they detach from the tree. Mature apples separate easily from the spur or twig. Grasp the fruit and lift up with a slight twisting motion. Avoid pulling down on apples when you pick them as this removes the fruit spur along with the fruit. Spurs are very short branches that bear fruit every year. If you remove too many, you'll reduce apple production over time. The appropriate harvest dates for some common, recommended varieties are: Redfree: early August; Prima: mid-August; Priscilla and Jonafree: early September; and Golden Delicious: mid-September.

More advice and tips at mobot.org/gardeninghelp.



Plant Societies' Shows and Sales

Get the latest information about your favorite plant society's show and sale by visiting mobot.org/plantsocieties.

Key (All events take place at the Garden unless otherwise noted.)

- BH Butterfly House
- BHGS Butterfly House Gift Shop CA Cohen Amphitheater CBEC Commerce Bank Center for Science Education
- CHD Children's Garden
- CL Climatron lawn GGS Garden Gate Shop
- JE Jordan Education Wing (in RVC)
- Kemper Center for Home Gardening Little Shop Around the Corner Monsanto Research Center
- Monsanto Hall (in RVC) **RVC** Ridgway Visitor Center SNR Shaw Nature Reserve Spink Pavilion ST Shoenberg Theater (in RVC)
- Sassafras Members-only event Double punches at Garden Gate Shop Double punches at Butterfly House Gift Shop Reservations required

Fee required

photos by (front) Tom Incrocci, Wesley Schaefer, Karen Fletcher, Sundos Schneider, and Mary Lou Olson (this page) Tom Incrocci,